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THE UNIVERSITY OF ALBERTA

# POPULATION DYNAMICS OF A MINORITY COMMUNITY: CHRISTIANS OF KERALA, INDIA

by

© PUTHUPPARAMPIL MATHEW ANDREWS

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
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DEPARTMENT OF SOCIOLOGY

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THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

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TO

ALL MY TEACHERS

# ABSTRACT

The present study is a historical examination of the demographic changes that have taken place in a minority community (Christians), in a small state (Kerala) of a large underdeveloped country (India), which is undergoing the process of demographic transition.

Examination of the available data shows that the Christians in Kerala have higher birth rate and rate of growth as compared to the majority group, the Hindus. When compared to another similar minority group, the Muslims, the Christian birth rates of growth seem to be comparable. In the absence of the use of any voluntary fertility limiting practices the explanation for the differential fertility behaviour, lies in the socio-cultural, economic and occupational differences that exist between these religious groups. Actually it is felt that the "religious affiliation", served as a proxy for a number of socio-economic characteristics. The minority group status was found to be an unimportant factor because the Christian population originally branched off from the majority population, the Hindus, through a process of conversion. They share a lot of common social and cultural practices. Since the majority and minority communities live in peace and harmony, competition between them for numerical superiority is not a factor in the differential fertility behaviour.

A comparison between India and Kerala shows that Kerala has the lowest birth rate among all Indian statesnow. However, the rate of growth of population in Kerala is slightly higher than the all India average. This is due to the fact that Kerala has very low mortality rate as well. Higher levels of literacy, better standards of public health and hygiene are the determinants of this very low mortality. It is noted that the relatively high rate of growth of population is the greatest threat to the social and economic development of Kerala and to overcome this problem, birth rate has to be reduced drastically. Experience of the seventies shows that enlightened family planning program can contribute towards the solution of the population problem even in the absence of a dramatic change in the economy of a region. It is believed that the pattern shown by Kerala may be a model for India.

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# I. INTRODUCTION

## A. The Research Problem

This dissertation is primarily concerned with the influence of religion on the fertility behaviour of the population of Kerala which consists of a majority religious group, the Hindus and two minority groups, the Christians and the Muslims and the nature of demographic transition taking place in this state. Since demographic information classified on the basis of religion is not available from the Indian censuses after 1941, the time span for the analysis of fertility differentials is limited to a period of fifty years between 1891 and 1941. The study of demographic transition, naturally, goes beyond this period.

## B. Religion and Fertility

From a sociological point of view, religion is the most common manifestation of the value orientation of a society. It was conceived by many social scientists that the importance of religion declines as the society progresses in terms of science and technology. But Lenski's (1961) study has shown that in spite of relative secularization in advanced societies, religion is still a very important force and its influence on social behaviour can never be ignored. In less developed and structurally less differentiated societies, religion is perhaps the most important factor influencing social behaviour. In the field of demography, the influence of religion is felt more in the sphere of fertility than on any other variable. The literature on differential fertility shows that even after controlling for other significant variables like socio-economic status, the influence of religion is too important to be neglected. The minority status of certain religious groups in larger societies gives rise to complex behavioural patterns as far as fertility is concerned. Depending on the basic value premises supplied to them either by "religious leaders" or by in-group socialization, minorities could take a pro-natalist or an anti-natalist attitude. Various studies conducted in the past have shown a clearly different behavioural pattern for minorities with regard to fertility. For example, Goldscheider and Uhlenberg (1969) attribute the differential fertility behaviour of Jews, Japanese Americans , and American Catholics to their minority status. Similarly, Chandra Sekar's (1948) study of the Parsis in India has shown a significantly different demographic behaviour in this group which could be attributed to their religious minority status. Findings of this study have been reinforced by a recent work on Parsis in Karachi, Pakistan conducted by Gustafson (1969). A comparative analysis of Islamic and Christian fertility in

Lebanon done by Yaukey (1961) has also shown significant differences in the fertility behaviour of these two groups.

In all these studies, perhaps with the exception of Yaukey's, minority religious status could be considered as the primary reason for the differential fertility behaviour. This directly leads to the question whether this pattern of differential fertility behaviour is universally applicable in a religious minority situation. In our research, we are primarily concerned about the fertility behaviour of Christians in Kerala. Christians are selected for special attention for a number of reasons. They are one of the two significant minority groups in Kerala. Christianity came into Kerala mainly through conversion from Hinduism and probably due to this reason, the Christians still retain a large number of the Hindu social customs and practices. The Christians, again, are characterised by higher levels of literacy as compared to the Hindus and the Muslims. We are interested in knowing whether these peculiarities of the Christians have any influence on their demographic dynamics.

## C. Relevance of the Study of Demographic Transition

The concept of demographic transition dealing with the process of population change from high birth and death rates to low birth and death rates is one of the principal concerns of modern demography. Attempts at formalizing this process on the basis of the experience of Western Europe is commonly known as the theory of demographic transition. Population change, according to the theory takes place in a sequence of three stages. First, the pre-transitional stage, is characterised by high birth and death rates and the consequent low rate of natural increase in population. The crucial second stage, the transitional, appears in three phases. In the early transitional phase, death rates fall while birth rates remain high or even increase. In the midtransitional phase both birth rates and death rates fall but the decline in the latter is more pronounced. The late transitional phase is characterised by low and unchanging or slightly declining death rates and moderate to low and fluctuating or declining birth rates. In the post-transitional stage, low birth and death rates keep the rate of natural increase (Bogue, 1969).

In the earlier formulation of the theory, a close link between economic development and population change is postulated (Notestein, 1953). The pre-transition stage existed in primitive, labour intensive, agrarian communities where economic and social functions of the individual were organized around the family. Achievement orientation, the level of education and the status of women in such societies were very low. Demographic fluctuations in these subsistence societies were related to crop fluctuations. They did not have any effective means of controlling death. High fertility was necessary for societal survival with the prevailing mortality regime (Bizien, 1979). The population size remained relatively stable.

Economic development enhances the productivity of primitive societies through increased division of labour and improved technology. The direct consequences of economic development like increase in food supply and establishment of law and order along with its indirect consequences such as improvement in public health, development of medical technology led to a significant reduction in death rates (Coale and Hoover, 1958). However, fertility decline did not follow immediately as it had to wait for the absolescence of the social and economic order built around the family. Economic development aided the growth of the urban industrial society. The urban life weakened the importance of family, in matters of production, protection, education and recreation. The direct and indirect costs of having children increased while their economic value declined (Leibenstein, 1957). These and other related socio-economic factors gradually weakened the old ideas about large family and people started preferring smaller families for reasons of better standard of living. A trend towards conscious birth limitation started among the upper and the middle classes in the urban society which gradually moved into the lower class. At first, they were using primitive methods but later they started using more effective modern methods as they were developed.This resulted in rapid decline in birth rates (Notestein, 1953). The end result of the process is the emergence of societies with low birth and death rates.

This formulation of the theory based on the experience of industrialized nations suffer from a number of weaknesses. The theory does not possess a specific causal mechanism and fails to identify crucial developmental variables affecting the process of demographic change (Concepcion, 1967). The absence of a definite time scale is another significant problem (Teitelbaum, 1975). The time scale is important both in the completion of the process and in the fertility lag. The failure of the theory to state its unit of analysis and the inability to treat mortality independent of economic development also create theoretical problems. These theoretical weaknesses create serious methodological problems especially with regard to measurement and data collection regarding economic development (Beaver, 1975).

In addition to these theoretical and methodological problems, there are quite a few empirical problems as well. A closer examination of the experience of Western

Europe (Coale, 1973) shows that there is no uniformity with regard to lag time involved in fertility decline. In fact, the experience of France in the 18th century and Germany in the 19th show that fertility and mortality can decline simultaneously without a lag. The postulated relationship between economic development and mortality always does not hold good. France and Ireland started having fertility decline without much economic advancement while England and Germany showed the opposite trend. Similarly, the specified relationship between economic development and fertility is violated by the experience of England and Wales (Beaver, 1975). There is no uniformity regarding the time taken for the completion of the process of demographic transition. The United States took half as long time to complete the transition as did Western Europe while Japan did it in half the time taken by the United States (Bizien, 1979).

These theoretical, methodological and empirical inadequacies of transition theory, according to some critics, makes it virtually useless as an analytic tool (Goldscheider, 1971 ; Wrong, 1967). However, the importance of the fuller understanding of the internal dynamics of this phenomenon is not questioned. The population historians, have not shed considerable light on demographic processes possibly due to the paucity of accurate numerical information. Thus the burden of explaining the past demographic trends falls squarely on the shoulders of the demographer.

Sociologists in general and demographers in particular are trying to free themselves from the belief that they can build grand theories which can explain a social phenomenon irrespective of time, place, or cultural background. Therefore, it is rather naive to assume that a general theory of demographic transition could be developed by historical studies. In recent times, there is agreement among demographers that the "new transition" (Kirk, 1971) taking place in underdeveloped countries is different from the "old transition" that took place in Europe in the 18th and the 19th centuries.

The important differences between the two types of transitions lie mainly in the different initial conditions regarding fertility and mortality. The current pre-transitional societies have a higher level of fertility as compared to the pre-transitional Europe. For example, in the 19th century the total fertility rate of Sweden and England was around 5.0 while it is about 8.0 in many African populations. Similarly, the proportion of women remaining single at the end of child bearing age was more than ten percent in most of the European populations (sometimes as high as 20 or 30 percent) while the proportion is less than five percent in many traditional societies of Asia and Africa. There is also a significant difference in the age at first marriage between these societies (Coale, 1973).

The rate at which mortality is declining is another point of difference between these two transitions. In the earlier transitions, mortality started declining slowly, usually in response to economic development but in modern transitions the rate of decline is quite rapid. This is largely due to the impact of improvement in public health and medical technology (Krishnan, 1980) rather than improvement in economic conditions as specified in the conventional transition theory. For the opposite point of view emphasising the importance of economic development, see Krishnan (1975).

These two forces - higher fertility and rapidly declining mortality - have created a unique problem for less developed countries. They are forced to accommodate populations growing rapidly. The thin resource base, unfavourable land man ratios, high density of population, unstable political and economic conditions and a rigid institutional framework add other dimensions to this problem. Recently Muhsam (1979) has challenged the traditional link between mortality decline and the decline in fertility. He is of the opinion that the socio-cultural forces operating in many less developed countries do not induce a rapid decline in fertility in response to a mortality decline, as it is supposed to have happened in

Western Europe. Besides, such a response was not a universal feature of the Western transition either. However, there are a few factors existing in less developed countries which are favourable to fertility decline. The rapid pace at which economic development is taking place in these countries (as compared to 18th century Western Europe) can have a negative effect on fertility. Further, it has been pointed out (Gopinathan Nair, 1974 ; Krishnan, 1980) that economic development is not a necessary condition for rapid decline in fertility. Increased involvement of governments in reducing population growth through family planning has contributed to the decline of fertility in many countries. Unlike much of the 19th century Europe, most of the developing countries have the necessary administrative and technological infrastructure to enable them to achieve their goals in this respect (Teitelbaum, 1975).

All these call for a reexamination of the inner mechanisms of demographic transition and the creation of partial theories applicable to specific regions, utilizing the available information from the past and the present. This venture has its own intrinsic merits. But it is more important from a practical point of view. Most of the underdeveloped countries of Asia and Africa are suffering from "excessive population". They do not have any scope for external migration which was the safety valve for the

European population expansion. Since increasing mortality is morally unjustifiable, the only alternative open to them is the reduction of fertility. It has been noted that while mortality is mainly related to technological and public health factors, fertility in underdeveloped countries is determined more by socio-cultural factors. These factors are often found to be slow in responding to societal needs. A fuller understanding of the subtlety and complexity of the process of transition will enable us to detect the immediate determinants of fertility which could be successfully manipulated to achieve desirable results. This is what is being done through population planning in underdeveloped countries.

### D. Rationale for Selecting Kerala as the Focus of Attention

India, no doubt, is in the process of transition and the adverse effect of population explosion is felt in India more than in any other country in the world, perhaps with the exception of Bangladesh. Indian and Western social scientists agree that no real and sustained socio-economic advancement is possible without reducing the high rate of growth of population. Owing to the existence of a number of peculiar socio-economic characteristics, we have selected Kerala state in India for an intensive study.

Kerala is a small state which is both typical and untypical of India at the same time. In many ways, as Mankekar (1965) points out, Kerala is the microcosm of India. It projects an enlarged version of many of the chronic problems of India, such as low level of income, dependence on agriculture, chronic deficiency of food, staggering unemploymentand very high population density. On the other hand, it differs from the rest of India in terms of literacy, religious composition, political activism, political preferences, export orientation of the economy, level of social change achieved etc. These social, political, cultural and economic similarities and dissimilarities will be addressed in a more detailed fashion in the next chapter. Kerala, undoubtedly, is in the vanguard of social change in India. It has the lowest birth and death rates in India at present. But at the same time the rate of growth of population is almost the same as that for the rest of India. If we can follow the internal dynamics of population change in Kerala, we can apply those to the rest of India, and Kerala certainly is capable of being the "growth centre" from which social change could be disseminated to the rest of India.

Another important reason for selecting Kerala as the centre of our attention is the peculiar religious composition of the state. According to 1971 census, the three major groups, Hindus (59.4%), Christians (21.1%), and Muslims (19.5%), account for practically all the population of the state. In other words, there is a majority religion and two significant minorities. It gives us an opportunity to look at the differential fertility behaviour of these three religious groups. This is particularly important from the larger context of India, where some demographers attribute higher fertility to religious influences.

### E. Major Objectives of the Study

We have addressed to the following major questions in this study:

1. Do the Christians show a different fertility behaviour as compared to the Hindus and the Muslims?
2. If they do, could it be explained by economic, social and cultural factors rather than religious differences?
3. Is Kerala ahead of India in the process of demographic transition?
4. If Kerala is ahead in the process, can India learn from the experience of Kerala?

### F. Outline of the Thesis

The remainder of this thesis consists of six chapters. Chapter two deals with a brief examination of the socio-cultural history of the state of Kerala and its people. The origin and development of Christianity in Kerala is outlined in the third chapter. This chapter also contains a short account of the social and cultural characteristics of the community under study. The fourth chapter enumerates the sources of data used in the study as well as the problems related to the data. Various analytic techniques utilized in this research are also described in this chapter. Results of the empirical analysis along with an explanation of these results are given in the fifth chapter. In chapter six, we have attempted a comparative evaluation of the results of our research in the broader context of India. The current population trends in India and Kerala are also examined in this chapter. The final chapter contains a summary of the findings along with a few possible directions for further research. Theoretical and practical significance of this study, in the context of historical demography in India, is also indicated in this chapter.

# II. A SOCIO-CULTURAL INTRODUCTION TO KERALA

In this chapter, we give a brief socio-cultural introduction of the state of Kerala, comparing and contrasting it with the broader socio-cultural entity that is India. The geography, the history, the climate and the culture separate Kerala significantly from the rest of India. These differences are important in the study of social behaviour of Keralites in general and their demographic behaviour in particular.

Kerala is the southern most state of India, the second smallest of all Indian states (see Appendix C). It is a narrow strip of land squeezed between the ranges of Western Ghats and the Arabian sea. The average width of the state is about 41 miles (66 kilometers). The central region has a maximum width of about 75 miles (121 kilometers). The minimum width is about 20 miles (32 kilometers) at the northern and southern extremes. The maximum length of Kerala along the coastal line is 360 miles (580 kilometers). The total area of the state is about 15,000 square miles (38,850 square kilometers). While it covers only a little more than one percent of the total land area of India, more than four percent of the population of India inhabit this state. The density of population in Kerala according to the 1971 census is about 1422 inhabitants per square mile (549 inhabitants per square kilometer).

The climate of Kerala is sub-tropical. It is blessed with a very high degree of rainfall which explains the perpetual lush green foliage. Numerous rivers and small canals, which characterize the geography of the state may be the reason for the extreme physical cleanliness of the people. With its mountains, valleys, rivers and backwaters, Kerala possesses an exquisite landscape and the people of Kerala, wherever they are, have an almost mystical attachment to their homeland.

The present state of Kerala came into existence when the Indian states were reorganized on the basis of language in 1956. It comprises of the former state of Travancore-Cochin minus Agastheeswaram, Thovala, Kalkulam and Vilavancode taluks [1] of Trivandrum district and a small portion of Shencottah taluk of Quilon district plus Malabar district excluding Laccadive and Minicoy Islands and Kasargod taluk of South Canara district of the former Madras State (George, 1959). The two former princely states of Travancore and Cochin were united into the state of Travancore-Cochin in 1951. The geographic location of territories added and taken away from Travancore-Cochin state is given in the attached map (Appendix D). A list of territories lost and gained are given in table 2.1.The bond which unites the people of Kerala is the common language Malayalam, which is a Dravidian language

---

[1] A taluk is an administrative sub-division immediately below the district level.

## TABLE 2.1

Territories and Population Lost to and Gained from Madras by Travancore-Cochin in the Formation of Kerala.

| State | Territories lost to Madras | |
|---|---|---|
| Travancore-Cochin | From Trivandrum District | The Taluks of Thovala<br>Agastheswaram<br>Kalkulam<br>Vilavancode |
| | From Quilon District | Parts of the Taluk of Shencottah |
| | Territories Gained from Madras | |
| Madras | From Malabar District | The whole District except Laccadive and Minicoy Islands |
| | From South Canara District | The taluk of Kasargod. |

| | |
|---|---|
| Population Lost by Madras | 5559174 |
| Population Lost to Madras | 907651 |
| Net Loss by Madras | 4651523 |

Source: Summarized and Estimated From Census Report.

influenced significantly by Sanskrit.

Kerala as a cultural entity, sometimes referred to as Malabar, existed even before the beginning of the Christian Era. Prosperous and peaceful trade relationship existed between Kerala and the rest of the world from time immemorial. The spices Kerala produced, pepper, ginger, cardamom, clove, cinnamon and nutmeg, brought it in touch with practically every part of the ancient world. Trade later led to cultural exchange. Accounts about Kerala can be seen in the ancient Greco-Roman writings as well as in medieval records. In the modern period, the relationship between Kerala and the West started with Vasco da Gama's arrival at Calicut on the Kerala coast in 1498. Various European nations followed the lead of Portugal in establishing trade relationship with India. In the ensuing power politics between them, eventually Britain emerged victorious. This sketchy version of history is mentioned here just to point out that the culture of Kerala evolved over centuries through constant contact with the various parts of the world.

From the economic point of view, Kerala is one of the poorest states in India with a very low percapita income. Kerala has the highest level of unemployment among Indian states. Agriculture is the primary occupation of the people, specializing in cash crops like rubber, tea, coffee, and spices. Though it earns a significant amount of foreign exchange, Kerala is chronically dependent on other parts of India for its main item of food, rice. There are very few large scale industries. Only less than 18% of the labour force is engaged in industrial pursuits. The industrial resource base is very poor. A major potential resource is the fish in the Arabian sea which is not being exploited to capacity.

Hinduism, Christianity and Islam together account for 99.96% of the population, as has already been mentioned. However, unlike other parts of India, there is a very high degree of religious harmony in Kerala. The Hindus have numerous sub-castes. Although caste system in the traditional sense did not exist in Kerala, distinction between the upper class (Savarnas) and the lower class (Avarnas) was there, and the plight of certain elements in the lower class was deplorable. The political and social scene was completely dominated by the upper class. In addition to the evil of untouchability, there were "unseeability" and "unapproachability" too. The legal system was biased towards the upper class. The lower class was prohibited from entering temples. Rigidities of the caste related institutions began to break up by the early part of the present century. Social reformers and thinkers from various Hindu sects are responsible for such changes. At present the caste distinction is only in name and legally there are no privileges attached to the upper class as in the past. Untouchability and related evils are things of the past. Of course, it is true that many cultural remnants from the past still persists and it prevents various classes from mingling in a social sense. For example, even now, intermarraige between individuals of different classes is a rarity.

The Hindus belonging to the middle order of the caste system, generally followed the joint family system of social organization and the matrilineal form of inheritance. These practices were necessitated by the peculiar political, economic, social and demographic circumstances which prevailed in Kerala in the past (Menon, 1978). However, these systems are breaking down at a faster rate, owing to the rapidly changing social, economic and political factors. Social reformers have created an awareness among the masses about the adverse effects of these institutions on social progress and the injustice they have done to individuals. A number of progressive Acts were passed by the governments of Travancore, Cochin and Madras, affecting the inheritance system of various Hindu castes. The rise in literacy also contributed to the gradual disappearance of the joint family system and the matrilineal form of inheritance.

The Christians in Kerala belonged to a single group until the middle of the 17th century. Schisms, ideological disputes, property litigations and the influence of various groups of missionaries from the West led to the emergence of nearly a dozen Christian sects in Kerala. A detailed account of the history of Christians is given in the next chapter. However, it should be pointed out that apart from the doctrinal subtleties, there is not much difference between the various Christian sects either socially or culturally.

The Islamic faith was introduced into Kerala during the 8th century by the Arab traders. Its growth was facilitated by the royal patronage extended by the Zamorins, the rulers of Calicut, whose navy the Muslims later manned. When Pakistan was formed in 1947 as a result of the partition of India, there was a numerically insignificant outflow of Muslims from Kerala to Pakistan. The cultural differences that existed between the Muslims of Kerala and the North Indian Muslims are cited as the primary reason for this low volume of emigration.

The occupational distribution in Kerala traditionally followed the religious lines. The Hindus were engaged in a variety of occupations depending on the caste status. The upper class Hindus were land owners, a kind of absentee landlords who lived on the proceeds from lands leased out to tenants. The lower class Hindus were engaged in a number of economic activities ranging from military service to menial jobs. However, most of them were artisans of one type or another. A few of them engaged themselves in agriculture as well. The Christians were primarily farmers. There were a few in trade and commerce. Trade and commerce were the primary occupations of Muslims. A sizable number of them were also in agricultural pursuits. In recent years the pattern of occupational distribution is changing very fast as a result of the breakup of caste distinctions and the spread of education.

In spite of the differences in religious faith, the people of Kerala live in an atmosphere of tolerance and amity. The religious conflict which is ever present in the northern parts of India is conspicuous by its absence in Kerala. In fact, the gradual evolution of the cosmopolitan culture of Kerala was facilitated by the interaction of people belonging to different religious faiths and cultures. The peculiar geographic situation of relative isolation also might have aided the development of this unique culture which is a paramount example of unity in diversity.

A closer examination of a few conventional indices of social change like, the level of literacy, the participation of women in the labour force, the growth of urbanization and the degree of political participation, shows that Kerala has achieved the highest level of social change in India. The level of literacy at present is more than double that for the rest of India. Female literacy is three times as high in Kerala. This unique position of Kerala in the literacy map of India is not the result of a sudden spurt of interest in the field of education, but the climax of enlightened policies followed by its rulers and the intellectual pursuits of the people spread over several centuries (Menon, 1978). Education was universal in ancient Kerala. Aryanization in the early middle ages made it a class privilege. This caused a decline in the standard of education. The kings who ruled different parts of Kerala patronised education from the Middle Ages. The Portuguese missionaries, despite the problems they created for the local Christians, promoted education. The Dutch missionaries who followed the Portuguese were also enthusiastic about spreading education. Their efforts have significantly helped the development of Malayalam. Missionaries who came from various European countries during the 18th and the 19th centuries, started the western system of education in Kerala. Services of Church Missionary Society in this regard deserve special mention. Other religions followed the example of Christians in setting up educational institutions. However, it should be mentioned that the local kings took keen interest in the development of education in Kerala. They extended liberal financial aid to the educational institutions started by missionaries. In addition, these kings also founded a number of secular institutions for higher education. In

1937, the University of Travancore was set up by a royal proclamation. In 1957, after the birth of Kerala, the jurisdiction of the University of Travancore was extended to cover the whole state and was renamed The University of Kerala. At present, Kerala has three universities and more than 125 recognized post-secondary educational institutions. Amajority of them belong to various religious groups in terms of ownership and control. However, instruction is secular and no segregative policies are followed in admission practices. More than 95% of the children in the age group 5-14 attend schools. In this context, it must be added that the educational system of Kerala was completely unplanned and as such the supply of educated persons, especially graduates, is far in excess of the demand for them. This is resulting in massive unemployment of the educated, which is one of the cancers of Kerala society.

Newspapers and periodicals play an important part in the cause of social education, apart from formal education. According to 1979 statistics, Kerala had 67 newspapers and 390 periodicals. Malayalam has a well-developed literature among Indian languages. Novel, short story and drama are the principal media of literature and all three give importance to social themes. Also Kerala has a very prosperous movie industry. Nearly 50 Malayalam movies are produced annually.

The census figures on the proportion of urban population (15.1 in 1961 and 16.3 in 1971) are highly misleading in the case of Kerala because it has a unique system of spatial distribution of population. The whole state looks like an extended city in the sense of continuous physical build up and it is very difficult to separate urban area from rural. Of course, there are half a dozen large cities, but most of the population is scattered throughout a large number of smaller towns and larger villages. Owing to this unique spatial distribution, increase in the proportion of urban population is not as large as in the rest of India. Nearly 60% of the population are engaged in agriculture-related occupations. Even those who are not in agriculture based occupations have an attachment to the land. Those tertiary workers in the urban areas very often hold a claim to some (usually ancestral) land in rural areas.

Politically, Kerala is the most unstable state in India. This instability springs from extreme political sensitivity and the eagerness to experiment with various political ideologies. The people of Kerala were the first to elect a communist government through democratic process. However, they did not hesisate to bring down that government when they were disenchanted with its performance.

Demographic aspects of Kerala will be analysed in detail in the subsequent chapters. However, it is important to mention here that Kerala has the lowest crude birth and death rates among all the Indian states. But the rate of natural increase in Kerala is as high as the rest of India.

Thus we see that while Kerala shares most of the serious problems of India in greater intensity, there are certain unique features which make Kerala untypical of India.

# III. A BRIEF HISTORY OF CHRISTIANS IN KERALA

This chapter is devoted to a brief examination of the origin and development of Christianity in Kerala and a look at the socio-cultural characteristics of Kerala Christians. The history of Christians in Kerala could be broadly divided into three periods: the Pre-Portuguese era of relative tranquility, the Portuguese era of strifes and schisms and the Modern era.

## A. The Pre-Portuguese Era

The Christians of Kerala, commonly known as the Saint Thomas Christians, irrespective of their current denominational affiliations, claim apostolic origin to their branch of Christianity. They are quite proud of the tradition which says that Apostle St. Thomas, who landed at Malankara near Cranganur in A.D. 52 is the founder of their Church. During his missionary work in the region, Apostle Thomas converted several influential Hindu families to Christianity and founded seven churches in various parts of Kerala. After establishing a solid foundation for Christianity in Kerala, the Apostle entrusted the care of the Church to a deacon and moved to eastern Coromandel coast where he died at the hands of hostile Brahmins and was buried at Mylapore, a city near Madras. There are a number of romantic stories related to the arrival, missions, miracles and the martyrdom of

St.Thomas mostly derived from the apocryphal tale of the "Acts of Judas-Thomas." Probably due to the fantasy element in these tales, an important authority like Rae (1892) rejects the whole St.Thomas episode as unhistorical. However, an examination of the political and commercial history of the world around the first century A.D. would show the existence of significant commercial ties between India and the Greco- Roman world. The sea and land routes from the West and Middle East to South India, the active trade in spices, sandal wood,ivory, gold and the like, imply close contact between these regions. In this context, the arrival of a missionary in Kerala from the Middle East, especially one with the zeal and courage of St.Thomas, is very much a possibility. Besides, archeological evidence gathered from the tomb of St.Thomas at Mylapore (Podipara, 1970) also supports the fact that it was built in the first century A.D. Thus one does not have to subscribe to the miracles mentioned in the "Acts of Judas-Thomas," to believe that the apostle came to Kerala.

Establishing the authenticity of the St.Thomas tradition is not our primary concern and as such a detailed examination of the voluminous, historical, archeological and philosophical evidences is not warranted here. Our purpose is to show that Christianity existed in Kerala during the early centuries of the Christian era.

Records of the Western Churches at this time do not shed much light on this issue. For one thing, the western church was undergoing a very trying period of persecution by successive Roman emperors and much of the records are not available on this period. Breakage of communication between the East and the West due to constant wars between the Roman Empire and the powers of Western Asia could be cited as a reason for the lack of records. In the absence of such records from the West, we have to depend mainly on the records of Eastern Churches for enlightening us on the early history of the Kerala Church. Referring to the records of the Council of Nicea and the writings of ancient scholars and churchmen like Clement of Alexandria, Bishop Eusebius of Caesarea and St.Jerome, Pothan (1962) concludes that there is sufficient evidence for the existence of Christianity in Kerala at a very early date, certainly before the end of the second century.

However, we do not have a clear idea about the growth and development of the Church during the early period and the Middle Ages as the relevant records were destroyed by the Mongol hordes and the Portuguese Jesuits. Records kept in the Nestorian repositories of Mesopotamia were destroyed when the Mongols plundered that region. The Portuguese Jesuits, according to the dictates of the Synod of Udayamperur deliberately set fire to the Church records kept in Kerala, as they represented Nestorian heresy.

The meagre historical evidence available to us indicates that Christians of Kerala, converted either by St.Thomas or an early Christian missionary, were joined by groups of immigrants at various time points. The first of these groups, led by a Persian merchant, Thomas of Cana arrived In Kerala in A.D. 345. Commercial interests and religious freedom were the motives behind the migration of this group. It contained one bishop and a few priests. Thomas of Cana was in good terms with the King of Malabar and the King granted trading privileges, social distinctions and a parcel of land to build a church and a town to Thomas. Even now there is a group of Christians in Kerala, known as the "Southists", who trace their origin to Thomas of Cana. They claim racial purity and protect it by disallowing intermarriage with other Christian sects.

In addition to the group mentioned above, there were other waves of immigration to Kerala from the Middle East. Atiya (1968) specifically mentions the case of Bishop Thomas and companions from Mesopotamia around A.D. 774 and Nestorian Bishops Peroz and Sapor and their followers around A.D. 840. These groups settled down near Quilon. Local rulers of the region granted both these groups charters inscribed on copper plates which conferred on them a high place in the caste system and other social and economic privileges.

These immigrant groups, perhaps with the exception of the "Southists", intermingled freely with the local Christians and in course of time became indistinguishable. The early Christians lived in peace and harmony with their Hindu compatriots. The Hindu kings allowed considerable freedom to their Christian subjects. The bishops of the Christians were invested with both civil and ecclesiastical jurisdiction of the entire Christian Community. The Hindu administrators interfered only in criminal offences.

The early records of the Middle-Eastern Churches clearly show that the St.Thomas Christians maintained close ties with these Churches especially the East Syrian see of Seleucia-Ctesiphon from very early time onwards. These relaionships were basically of hierarchical nature. Bishops were sent to Kerala by the Seleucian Church at the request of Kerala Christians. These bishops, who were the spiritual heads of the Church were known as the "Metropolitan of India". The Metropolitan was assisted by a local priest in temporal and administrative matters and the title given him was "the Archdeacon of India". The position of Archdeacon was very influential as he was second in command of the Church.

This Seleucian connection probably explains the Nestorian influences found in the Church of Kerala as well as the use of East Syrian liturgical and canonical rites. However, it should be immediately added that the

Christians of Kerala were not very much concerned about theological intricacies. They adapted Eastern Christianity to Indian culture and created a unique form of faith, the preservation of which was very important to them.

## B. The Portuguese Era

The next significant episode in the history of Christianity in Kerala is the arrival of the Portuguese in Kerala. Vasco da Gama landed at Calicut in 1498 and established trade relationship with the Zamorin of Calicut. Vasco da Gama was followed by Cabral, who had missionaries of various orders with him. They began evangelization in Calicut and in Cochin, where they moved later. There was resistance from the Hindu rulers who opposed conversion of their subjects. The converts were denied many privileges. But this did not affect the poorer sections of the community, who did not have any privileges to start with.

At first the relationship between Thomas Christians and Portuguese was very friendly. The simple minded Thomas Christians, as Atiya (1968) points out, were "unaware of the depth of the denominational differences separating their churches as well as the totalitarian religious imperialism of Rome". Some Christian leaders, suffering from religious discrimination by the Hindu kings requested their alien Christian brethren for protection. Vasco Da

Gama and some of the Portuguese leaders who followed him extended political support and helped to regain some of their ancient privileges from the Hindu Kings.

Once Portuguese had consolidated their political position, the attitude of tolerance the missionaries showed towards the local Christian traditions, rituals and liturgy began to disappear. They began a ruthless program of Latinization. Disenchanted local Christians under the leadership of Archdeacon George publicly expressed discontentment in a Synod at Angamali. This infuriated the new archbishop of Goa, Alexis de Menzes. He visited Kerala and successfully intimidated the archdeacon and the other Thomas Christian leaders into accepting Roman faith. Dissidents were subject to inhuman torture by the Inquisition. In 1599, Menzes cunningly summoned a synod at Udayamperur or Diamper, situated a few miles away from Cochin in which 813 representatives (133 priests, 20 deacons and 660 laymen) took part. These representatives were literally terrorised by the presence of the Portuguese military and civil authorities and various decrees of the synod were passed without any significant objection from the frightened Syrian Christians. The Syrian doctrines were renamed in the synod and an oath was taken that they would never receive any bishop or religious leader without the approval of the Pope. All records and older books of the Thomas Christians were burned as they represented heresy.

The Synod of Udayamperur was a grand success in theory, as it firmly established the supremacy of the Pope in all matters related to the Church. However, the aboilition of ancient customs of Syrian Christians was not an easy task. Those who held fast to traditional beliefs practically moved inland or underground. They tried to get a bishop from Syria but it was difficult due to the Portuguese control of ports.

A Syrian bishop (Ignatius Ahatallah) was sent to India by the Coptic Patriarch of Alexandria in 1652. He was captured by the the Portuguese and dispatched to Goa to face the Inquisition. Rumour spread that he was drowned by the Portuguese. This incensed the Christians who marched in large numbers to Mattancherry near Cochin. They tied a long rope to an open air cross and touching this rope everyone gathered took a solemn oath to cast off the Roman yoke (as represented by the Portuguese). This is the famous Coonen Cross Oath which took place on January 3, 1653. In practical terms, it was the declaration of the local autonomy of the Thomas Christians. It also signalled the end of the Portuguese era.

### C. The Modern Era

A few months after the Oath of Coonen Cross, the representatives of Syrian Christians assembled at Alangat. Twelve priests placed hands on Archdeacon Thomas and consecrated him Archbishop Mar Thomas 1. The members of this assembly were made to believe that they were empowered to do this by the order of Ahatallah whose letter was read aloud. The new archbishop was given four councillors to assist him in the administration of the Church. Later, it was alleged that one of these councillors, Ittithommen, manipulated the situation including falsification of the letter from Ahatallah. Two dissatisfied councillors left the new organization and their supporters claimed that the consecration of the bishop was not binding, as priests (Kattanars) did not have the right to consecrate a bishop. Those who opposed the bishop went back to Roman allegiance and were known as "Old Party" (Pazhaya Kuttukar) and the supporters of the bishop are known as the "New Party" (Puthan Kuttukar). This marks the first significant split among the St.Thomas Christians. According to Rae (1892), the proportion of the followers of these two parties was probably 3 to 1 in favour of the new party.

Later history of the old party also known as Romo-Syrians is relatively uncomplicated. All the time they remained loyal to the Papal authority. When the rule of the Portuguese Jesuits became oppressive, they requested Pope for missionary orders other than Jesuits. Carmelites who succeeded Jesuits were sympathetic towards the local Christians in the initial stages. However, later Carmelite bishops proved to be more authoritarian than Jesuits. They destroyed all chances of reunion between the Catholic and non-Catholic Christians for fear of losing their authority. Occasional attempts by local Catholic priests to liberate their Church from the dominance of Carmelites were cruelly suppressed. Finally, the Papal Order 1887 liberated Kerala Catholic Church from the reign of Carmelites. The right to have local bishops to guide their Churches was granted to them in 1896.

The post-secession history of the "new party" was more tumultuous. In order to legitimize his position as bishop, Mar Thomas 1 requested help from the Syrian Church. A Syrian Jacobite bishop, Mar Gregory, came to Kerala in 1665. He was responsible for teaching Jacobitism to the "new party" and subsequently they were known as Jacobites. This was the beginning of the tacit acceptance of the Syrian supremacy.

By the end of the 18th century, the British emerged as the dominant political power in South India. The British administrators encouraged missionary activities and in this process invited Church Missionaries to Kerala. For some time very cordial relationship existed between

Church Missionaries and Jacobites. Church Missionaries helped to impart religious as well as secular education to clergy and the laity. However, the conservative elements in the Jacobite Church felt that Church Missionaries were leading their Church closer to Protestantism and accordingly they severed all connections with them in 1835.

The relationship with Church Missionaries encouraged a progressive group of Jacobites to argue for reforms in their Church on Protestant lines. Their leader was a local priest, Abraham Malpan. They also wanted relative autonomy for the Church. The conservative elements, naturally, resented this. In the ensuing power struggle and the protracted litigation, the reform group ended up the losers. They formed an independent Church under the name Mar Thoma Syrian Church in 1809.

Another split occurred in the Jacobite Church in the beginning of the 20th century. Until this time, the authority of the Syrian Church over the Jacobites, though tacitly acknowledged, was exercised only minimally. The situation began to change early in the 20th century. Patriarch Abdallah of Antioch came to Kerala in 1909 in order to consolidate his position in the Church. The local head of the Church and a group of his followers opposed the interference of the Patriarch in the internal affairs of the Church. The infuriated Patriarch excommunicated the local bishop, Mar Dionysius and his supporters. This caused another serious split in the Church. Those who supported Mar Dionysius were known as the "Bishop's Party" and those who stood with Patriarch, the "Partriarch's Party".

In the protracted litigation between the two parties, favourable verdict almost alternated between them until the Supreme Court of India handed out a firm verdict favouring the "Bishops Party" in 1958. However, due to the effort of pious and concerned priests and laymen, a peace agreement between the two parties was signed later in that year by which the reunited Church became autonomous with its own synod of bishops under the presidency of Catholicos. The link between Patriarchate and the Catholicate was nominal as it consisted mainly the exchange of information.

After a decade of peace and progress, the Jacobite Church again entered into an era of controversies and litigations. Patriarch Jacob III of Antioch, who was a party to the peace treaty of 1958, started interfering in the affairs of the Kerala Church by appointing bishops for the Church. A group of bishops declared allegiance to the Patriarch and seceded from the Church. Litigation regarding the ownership and possession of various Churches are still in the law courts.

In addition to the three groups we have mentioned above, Romo-Syrians, Marthomites and Jacobites, there are St. Thomas Christians who belong to a few other denominations. A very brief account about these is given below.

A small independent church is called Anjoorians, after the place in which it flourished. This church was founded by Mar Cyril, who was expelled by Mar Thomas V1 (Mar Dionysius), about 1772. They could be called an independent Jacobite Church, and there is very little theological difference between them and the Jacobites.

Yet another group is the Church of south India, which is the South Indian Anglican Church. When the Jacobites parted company with C.M.S. missionaries, some 6,000 to 12,000 Jacobites joined the Anglicans. They form the core group in the Church of South India. Other members of the Church of South India are Basal Mission and London Missionary Society. The Church of South India have more recent converts than the descendants of the original St.Thomas Christians. Most of the converts in the past two centuries are from the lower strata of the Hindu society.

Another Christian group is the Syrian Catholics. They are the followers of Bishop Ivanius, who left the Jacobite Church in 1930 and accepted the supremacy of the Pope. His followers are mainly from the Jacobites and the Marthomites, who were thwarted by constant litigation that was taking place in these churches. They preserve most of the Jacobite practices.

The Latin Catholics form another significant sect of the Kerala Christians. The majority of them were converted to Christianity by the Portuguese Jesuits, especially from the lower classes. There are a few descendants of St.Thomas Christians who accepted Latin Rite. Thus, the Roman Catholics of today consist of the Romo-Syrians, the Latin Catholics and the Syrian Catholics.

Yet another group which separated themselves from the St.Thomas Christians is the "Chaldeans", who are concentrated in Trichur. The attempt by Chaldean Bishop Elias Mellus to resuscitate the original Nestorian belief in Kerala, resulted in the formation of this Church. They are also known as Nestorians, though they resent that appellation. In recent times, they have been influenced more by the Protestants. Their spiritual head used to be the Nestorian Patriarch of Babylon. But Bishop Darmo Mar Thomas broke off relations with the Patriarchate in 1968. As a result, there are two groups in the present Chaldean Church, the followers of the Patriarch and the followers of the Bishop.

In 1961, 18 dissident Marthomite priests who were defying the central organization of their church met together and anointed two other priests and proclaimed them bishops of a new church called the "St.Thomas Evangelical Church of India".

These are the various groups which are part of the St.Thomas Christians in Kerala. They are additions to the "Southists", who consider themselves the descendants of Thomas of Cana. One group of Southists belong to Catholicism, while the other keeps the Jacobite faith. Western missionaries belonging to various Christian sects, came to India in large numbers towards the end of the 19th and the beginning of the 20th centuries. Kerala also felt the impact of their work, resulting in the formation of a number of "Western Churches". A few of the prominent and non prominent ones are, the Salvation Army, the Seventh Day Adventist, the Brethren, the Pentecostal, the Church of God, the Yuyomayam and the Lutherans. Each of these denominations has a small group of followers. The exact numerical strength of the various Christian denominations are not clearly known. The Catholics form the largest group followed by the Jacobites, the Marthomites and the followers of the Churches of South India. Others are relatively smaller groups. Except for the Latin Catholics, who occupy coastal areas and the Anjoorians,other denominations are spread all over Kerala without any area of specific concentration.

## D. Social Life of Christians

The Christians in Kerala may be the descendants of converts from the Hindus. The early conversions were supposed to have been from high caste Hindus and the later ones from the lower castes. At the early points in time, small groups of immigrants from the Middle East arrived in Kerala. Most of them freely blended with the local Christians. Perhaps due to their high caste origin and their specialization in international trade, the early Christians were held in high esteem. The Hindu Kings granted many important titles to their Christian subjects.

The social life, customs and cultural practices of Christians, even today, closely resemble those of the Hindus. In fact, the Christian customs are the products of Christianization of the Hindu traditions. The combined influence of Hinduism and Christianity are clearly visible in functions related to birth, marriage and burial.

The birth of a child is a joyous occasion and is celebrated by both the Christians and the Hindus. The messenger who carries the good news is rewarded with many gifts. Until recently, astrology was practiced at birth and omens were guarded. The preference for male child is common among both the Hindus and the Christians. The rules about pollution are broadly similar in both communities. A Christian mother is not permitted to enter church before the fifty sixth day of child birth. The Christian child is baptized into the Church early in its life. The Hindu traditions are followed in naming the child. The ceremony attached to the first rice-feeding of the child, about six months from birth is a common custom among the Hindus and the Christians. The only difference is that one took place in the temple while the other in the church.

The ceremonies related to marriage closely resembled that of the Hindus. Child marriage was a common practice in both communities. Marriage was broadly an alliance between two families, rather than two individuals and the elders of the families very often arranged the marriages. The ceremonies related to the marriage were also similar.

The Christians, like the Hindus, were very particular about cleanliness. Perhaps this concern was reflected in customs related to death and burial. Rules of pollution were very strict. They did not cook or eat at the house of the deceased until the burial. The relatives of the dead were considered to be polluted for a prescribed period of time, the end of which was celebrated with a feast. From a demographic point of view, rules of pollution are related to health and mortality conditions. However, in the absence of concrete data, we are not in a position to draw any firm conclusions.

The places of worship, the churches and the temples also have striking similarity in design and construction. The Christian churches are distinguished by a large cross in front of them. Some scholars even think that the use of Syriac, a foreign language which most of the laity do not understand, in Church services is an imitation of the use of Sanskrit in temples. The purpose, in both cases, perhaps to create an element of mystery.

The dress patterns vary only marginally in the case of both the Hindus and the Christians. They also use similar ornaments. Their food habits are also similar, with a diet usually consisting of rice and vegetables. Meat, especially pork and beef, was rarely used. Intoxicating drinks were also avoided.

The primary occupation of the Christians was farming. Cultivation of pepper and spices was practically their monopoly. They also cultivated rice and coconuts. A few of them were engaged in trade and commerce. The Christian immigrants from the Middle East were specialists in international trade. There are historical records showing that the Christians owned ships and had trade agencies in other countries. They also traded with the Arabs at an earlier period and with various European powers in the modern period.

The Christians excelled in military service just like the Hindus. Male children were given military training between the ages of eight and twenty. It is said that at one time the army of the King of Cochin had nearly 50,000 Christian soldiers. Similarly, historical records show that when Thomas Christian leaders came to Cochin in order to enquire into the arrest of Ignatius Ahatallah in 1653, they had 25,000 Christian soldiers with them.

Like the Hindus, the Christians were given the privilege of carrying weapons. They carried swords, spears and at a later stage guns. They were experts in the use of these weapons. But, despite their skill in warfare, Christians were considered a generally meek population.

They were also involved in political administration. The Hindu kings were lenient towards the Christians as they helped them with men and materials during the time of wars. In return, the kings gave them free land and built churches for them. Some of the Syrian Christian leaders held high positions in the advisory council of Hindu kings.

Thus, we see that there was very little difference between the socio-cultural practices of the Christians and the Hindus. The Christians were different only in religious conviction. They were staunch in adherence to their faith and proud of the apostolic origin of their Church. Never did they make an attempt to change social customs and practices. In fact, they retained most of the customs and slightly altered a few. Even when modified, the influence of the Hindu system was clearly visible.

## E. Growth of Christian Population in Kerala

We do not have any concrete information about the size of the Christian population of Kerala in the pre-census period. The small group of the Christians originally converted by St. Thomas grew in numbers over the centuries through natural increase further conversion to some extent, and also through immigration from the Middle East. In the absence of specific sources of information, we may have to depend on certain rough estimates using non-conventional techniques.

The estimation of population from the war strength of a country or an area is one of such technique. Pran Nath (1929) is of the opinion that a ratio of 1:15-20 between soldiers and civilians is a reasonable one. Unfortunately, we do not have accounts of the Christian military strength on a regular basis. According to one report, there were 25,000 Christian soldiers in 1524 (Perumalil, 1975). This would mean, following Pran Nath's ratios, the population of Christians was some where between 375,000 to 500,000. It is reported that, 25,000 soldiers accompanied (Perumalil, 1975) the Syrian Christian leaders who came to Cochin in 1653 to enquire into the arrest of Ahatallah. It is unlikely that all the soldiers marched to Cochin. It is also stated earlier (P.51) that at one time the army of the king of Cochin had 50,000 Christian soldiers. Taking into consideration these two pieces of information, one can reasonably assume that the Christian population of Kerala has increased from 375,000-500,000 estimated in 1524 to 750,000-100,000 at a later period.

However, we have more reasonable figures for the Christian population , once decennial censuses had become a regular feature. The Population of Travancore-Cochin Christians from 1891-1941 and the Kerala Christians from 1951-1971 and the decennial growth are given in Table 3.1.

Figures given in Table 3.1 shows that the Christians of Travancore-Cochin were growing at a more or less steady rate. The fluctuations seen in 1931 and 1941 may be due to changes in census enumerations in 1931 and the unsettled political and economic conditions that existed in the late thirties. Steady growth, seems to have resumed after 1951. The rate of growth for the period 1941-1951 is not given due to the non-availability of data on Christians from Malabar. The decline in growth rate between 1961-1971 could be attributed to general decline in fertility in the state.

## F. Rural-Urban Distribution

Estimates of rural-urban distribution of the Christian population using the broader proportions computed for the entire population by Namboodiri (1968) is given in table 3.2. The percentage of urban population has increased from 7.1 to 16.2 in the 80 years under

## TABLE 3.1

## Population of Christians in Travancore-Cochin and Kerala From 1891-1971

### TRAVANCORE-COCHIN

| Year | Population | Decennial Rate of Growth |
|---|---|---|
| 1891 | 700737 | |
| 1901 | 859626 | 28.0 |
| 1911 | 1136960 | 27.0 |
| 1921 | 1435529 | 26.3 |
| 1931 | 1936345 | 34.5 |
| 1941 | 2310045 | 19.3 |

### KERALA

| Year | Population | Decennial Rate of Growth |
|---|---|---|
| 1951 | 2824991 | |
| 1961 | 3587365 | 27.0 |
| 1971 | 4497089 | 26.3 |

Source: Estimated from Census Data.

## TABLE 3.2

### Estimated Rural-Urban Distribution of Christian Population, Travancore-Cochin and Kerala, 1901-1971.

| Year | Urban | % | Rural | % |
|---|---|---|---|---|
| | | TRAVANCORE-COCHIN | | |
| 1901 | 61033 | 7.1 | 798593 | 92.9 |
| 1911 | 82998 | 7.3 | 1053962 | 92.7 |
| 1921 | 119149 | 8.3 | 1316380 | 91.7 |
| 1931 | 176207 | 9.1 | 1760138 | 90.9 |
| 1941 | 235625 | 10.2 | 2074420 | 89.8 |
| | | KERALA | | |
| 1951 | 330524 | 11.7 | 2494467 | 88.3 |
| 1961 | 541692 | 15.1 | 3045673 | 84.9 |
| 1971 | 729878 | 16.2 | 376712 | 83.8 |

Source: Estimated from Census Data.

consideration.

## G. Spatial Distribution

The geographic location of the various Christian denominations of Kerala cannot be easily specify in view of the lack of data. The Latin Catholics are located mainly in the coastal regions of Kerala as shown in the map (Appendix E). Other denominations live spatially intermingled. However, they are concentrated mainly in the central districts of Alleppy, Kottayam, Ernakulam and Trichur.

# IV. METHODOLOGY AND DATA

## A. Techniques of Estimation

An adequate description of the basic demographic variables requires both stock and flow information. The former, conventionally, is obtained from censuses while the latter uses vital registration as its primary source. However, a reliable source of such demographic information is available only in economically advanced countries. Most of the less developed countries do not possess a good data collection system. Since most of these countries are undergoing historically unprecedented demographic changes, they require a vast amount of information on demographic processes quite urgently. It is true that a large number of developing countries are trying hard to develop reliable census and vital statistics. Yet, even now, their vital registration is deficient. However, the quality of censuses has been improving steadily.

As we try to analyse the past population trends of developing countries, the problems related to the deficiencies in numerical information become more acute. The only source of reasonably reliable information is censuses. Fortunately, demographers have developed techniques for eliciting important demographic rates from census data alone. One such method is the stable population technique.

Lotka (1907) demonstrated that if a population is subjected to a fixed schedule of age-specific fertility rates and a fixed schedule of age-specific mortality rates for an indefinite period of time, controlling for migration, ultimately the population would assume a fixed age distribution. Although the theory of stable population and the computational routines required to determine stable population parameters had been worked out decades ago, it was realized only recently that its assumptions can be closely approximated to many human populations. With this realization, the stable population technique has become a powerful tool in estimating population characteristics when demographic data are deficient. However, the stringent assumptions of the stable population model are not always satisfied in real life situations and this reduces its applicability, especially in the case of underdeveloped countries, where mortality rates are declining rapidly.

Rele (1967) has suggested a few modifications to the stable population technique. According to him, even if all the assumptions of stable population are not satisfied, this technique may still be used with reasonable accuracy. For example, in a quasi-stable population where fertility rates are constant but mortality rates changing, the latter will have comparatively little effect on the age distribution, and procedures based on stable population model may reasonably be applied. The Rele technique largely relies on the relative insensitivity of the age distributions to the fluctuating levels of mortality and in that sense a rough conjecture of mortality level is sufficient to give fairly reasonable estimates of fertility based on the age distribution. The advantage of the Rele technique is that it makes the study of changes in fertility (where the stable population technique is inapplicable by definition) possible through the choice of indices which make the assumption of stability or even quasi-stability less crucial to the estimation procedure.

The population characteristics may be classified into three main categories based on the three aspects of population namely, fertility, mortality and age distribution. The first category includes all measures of fertility like crude birth rates, total fertility rate, gross reproduction rate, general fertility rate etc. Mortality includes measures of mortality like crude death rate, expectation of life at a given age, proportion of all deaths to individuals in certain ages, etc. The third category includes measures derived from the age distribution like the ratio of population of one group to another or to the total population. A fourth category can be constructed containing measures based on more than one of the aspects considered above, such as the rate of natural increase, (Rele, 1968).

Under certain circumstances, if population characteristics belonging to two different categories are given, the remaining characteristics could be determined by specifying corresponding stable age distribution. However, the choice of the two characteristics is very significant. A measure based on age distribution, such as the ratio of population of one age group to another is readily available from census data. (The choice of particular ratio among the available ones should be guided by practical considerations. The guiding criteria for this choice are that the ratio should be little affected by errors in age reporting and it should convey some thing meaningful about fertility which is the subject of analysis. The latter consideration is especially important when the population under consideration departs significantly from the conditions of stability or quasi stability). Choice of the second characteristic is usually more difficult. The rate of natural increase derived from the growth of population between censuses is considered to be a good measure but sometimes it is marred by migration between censuses and incompleteness of enumeration. Further estimates of fertility and mortality based on rate of natural increase are rather too sensitive to the rate of natural increase. In order to circumvent this difficulty, expectation of life at birth is very often used as a measure. The advantage of this measure is that it can be guessed roughly for most populations. An error in the value of expectation of life at birth will have relatively very little effect on the fertility index so that even a guessed value to the nearest multiple of ten is sufficient in most cases for the estimation of fertility (Rele, 1967).

In the case of Kerala, we encounter the same problem as in many underdeveloped areas. The only source of reliable demographic information we have is the six decennial censuses.

Since mortality rates are changing, the stable population techniques does not seem to be particularly applicable in this case. The technique developed by Rele for the quasi-stable population, is suitable for the analysis of the census data of Kerala. We have estimated crude birth rates for both Travancore and Cochin using this technique. We have selected 40 as the approximate expectation of life at birth, applicable to Kerala. In order to check the impact of lower expectation of life on birth rates, we have also estimated crude birth rates using 30 as the expectation of life. The estimating equation used for the computation of intrinsic birth rate is $Y = a + bx + cx^2$ where Y stands for the intrinsic birth rate and x for child-woman ratio. Values of the constants in the equation for life expectancy of 40 are

$$a = -5.40$$

$$b = 85.91$$

$$c = -22.11$$

Similarly we have used

$$a = -5.37$$

$$b = 94.21$$

$$c = -24.92$$

for life expectancy of 30.

In order to convert intrinsic birth rates to crude birth rates, we have used Rele's formula of

$$bc = bi\ X\ \frac{\text{(Weighted sum - Total population) for the given population}}{\text{(Weighted sum - Total population) for the corresponding stable population}}$$

Where bc stands or crude birth rate and bi for intrinsic birth rate. We have used the same set of weights 1,7,7,6,4,1, respectively for the six quinquennial age groups from 15-44 as suggested by Rele.

An alternative method of deriving vital information from census statistics was developed by Bogue and Palmore (1964). They realised the serious research problem faced by developing nations due to the absence of reliable vital registration. They analyzed data from 50 nations for which reliable statistics were available between 1955 and 1960 and came up with certain interesting relationships between the various measures of fertility. In general, correlations between direct measures, between indirect measures and between direct and indirect measures were found to be very high. On the basis of these high correlations, regression equations were developed from which one measure could be predicted, given information on another. What is particularly significant in the case of underdeveloped countries, with only the census to rely on, is the regression equations linking direct measures of fertility with indirect measures. Once we have indirect measures which could be easily calculated from census data, direct measures could be predicted with relative ease. These estimates could be further refined through multiple regression, if the census data provide information on a set of supplementary indices like infant mortality rate and median age at marriage. Further information from sample registrations could be utilized to improve the quality of census data. However, Bogue and Palmore warn us that these techniques are not supposed to be substitutes for other methods but are supplements to effect meaningful comparison.

In this study, we have utilized the Bogue-Palmore technique to estimate crude birth rates from two different child-woman ratios and three different proportions of populations. All equations have the general form of a simple linear regression equation, $Y = a + bx$. Constants used in our estimates are given below:

Child-Woman Ratio (1) $\frac{C(0-4)}{W(15-49)}$ a = .1373 b = .0529

Child-Woman Ratio (1) $\frac{C(5-9)}{W(15-49)}$ a =-3.859 b = .0664

Proportion of Children to Total Population (1) $\frac{P(0-4) \times 100}{P(Total)}$

a = -4.2551; b = 2.6263

Proportion of Children to Total Population (2) $\frac{P(5-9) \times 100}{P(Total)}$

a = -8.6670; b = 3.2723

Proportion of Children to Total Population (3) $\frac{P(0-14) \times 100}{P(Total)}$

a = -11.7240; b = 1.1835

In order to estimate the percentage of demographic transition completed by various religious groups, the state in general and India as a whole, we have utilized the technique developed by Bogue(1969). This simple technique assumes that the maximum possible fertility, is represented by the countries with the highest fertility today. Total and general fertility rates for these countries are estimated to be 7500 and 235 respectively. These rates form one end of the continuum and the other is denoted by a total fertility rate of 2200 and general fertility of 60 derived from countries which are assumed to have completed the process of transition. Percentage of demographic transition completed is measured through the following formula.

$$\text{PCT-DEM-TRANS-COMP-} = \frac{1}{2}\left[\frac{235-\text{GFR}}{175} + \frac{7500-\text{TFR}}{5500}\right]$$

It should be noted that the impact of mortality is ignored in this estimation procedure. The general fertility rate and the total fertility rate are derived through the regression equations given by Bogue and Palmore (1964).

$$\text{GFR} = 4.5952\ \text{CBR} - 8.5945$$

$$\text{TFR} = 30.195\ \text{GFR} + 343.28$$

In our estimates we have two sets of crude birth rates to derive the general fertility rate. The first set is an average of the crude birth rates estimated by the Bogue-Palmore technique. The second is an average of the two rates computed, using the Rele technique.

## B. The Sources of Data

Information for a study of this nature usually comes from vital registration, censuses, fertility enquiries and other governmental agencies. The quality of vital registration in India in general and Kerala in particular is considered to be very poor due to gross under-registration of vital events. Therefore, we have not used the information from vital registration in this study.

Another important source of valuable data is various fertility enquiries conducted in Travancore from 1921 along with censuses. These enquiries, though limited in scope in earlier years, have expanded their coverage in later years. They supply information on various aspects of fertility and nuptiality like, age and sex of children born and surviving, number of still births, duration of marriage, sex of the first child etc. (George, 1959). This source of information is not used in our study due to our inability to get access to this source.

Data from Sample Registration Bulletins (India), Country Demographic Profiles (U.S. Department of Commerce) and various U.N. sources are also utilized in the study of current demographic trends in Kerala and India.

Information from the studies by Srivastava (1972), Namboodiri (1968), and Krishnan (1977) have also been utilized in this research endeavour.

However, the primary source of data used in this dissertation is the past censuses of India. We have used information from six decennial censuses of the past, ranging from 1891 to 1941 for the former states of Travancore and Cochin. Our desire to continue the analysis of population trends into the post- independence era was hampered by the fact that cross- classification of data on the basis of religion was discontinued from 1951 onwards. Data from 1951 and subsequent censuses are utilized for making broader comparisons of population trends between

Kerala and India.

## C. Problems Related to the Data

The quality of census data which we are using is not very high. A few of the theoretical and practical problems related to the census data of the period are given below.

### 1) Conversion Factor

The period under study is characterised by extensive religious conversion. The efforts of the Christian missionaries led to the conversion of a large number of the Hindus to Christianity. There was also conversion from Islam to Christianity though to a much less extent. The magnitude of these conversions is not recorded in the censuses. This conversion factor is very likely to contaminate our estimates. One way of dealing with the conversion problem is to consider it as inter-religious migration and apply techniques of migration analysis to this problem. However, we have not attempted this procedure here due to the paucity of data. Since the socio-economic changes taking place during that period had affected the followers of all religions more or less equally, radically different demographic behaviour was unlikely. This factor might reduce the degree of contamination on a comparative level.

### 2) Enumeration Problem

Problems related to coverage, especially that of omission, seem very significant in the census data. One kind of omission is the under reporting of women who are not the spouses of the household head and children (Bogue, 1969). The issues related to selective under enumeration of female population for Pakistan and Nepal are studied in detail by Krotki (1963) and by Krotki and Thakur (1971). Omission of entire households from enumeration also was a very real possibility due to physical problems of inaccessiblity. Inability to locate people in their place of residence also creates problems for the enumerator. These problems could lead to vast under-enumeration of population in general and certain age groups in particular.

3) Issues Related to Age

Since we are depending to a great extent on the age distribution for our estimates, they could be seriously distorted by errors in age reporting. Errors in age reporting can occur when the enumerator estimates the age of respondent or depend on other people to gather information on the respondent. It can also happen when the respondent himself supplies false data for social and cultural reasons or out of sheer ignorance. An examination of the census data on Travancore and Cochin shows serious irregularities in age distribution. These issues are analysed in detail in Appendix A.

4) Use of Travancore-Cochin Data for Kerala

Another issue related to the census is the use of the expression "Kerala Population" when we actually have only the censuses of Travancore and Cochin. At the time of these censuses, the Malabar region was under Madras Presidency and the data for Malabar were included in the Madras Census Report to which we did not get immediate access. While we are not technically justified in using the expression, "Kerala", the essential cultural and geographic uniformity of the region might offer a defence to its continued use.

5) Non-Availability of Data on Various Denominations

A very important practical problem related to the census data, is the non- availability of information on the various Christian denominations separately. As we have noted on previous occasions, the Christians of Kerala consisted of four major denominations, Catholics, Jacobites, Marthomites and Protestants. In the absence of separate information, we are forced to treat all categories of Christians as one homogeneous group. However, this is unlikely to affect our analysis of the population dynamics of the Christians in Kerala as all these sects except perhaps Latin Catholics and to some extent Protestants, shared similar customs, beliefs and social practices, despite subtle theological distinctions. Their social customs and practices, as described in detail previously, were derived principally from the dominant

Hindu population to which they were all part of, at one time or other. The use of a single category is further justified considering the fact that during the period under study (1891-1941), there was very little emphasis on any kind of artificial fertility limitation. Gravity of the population problem was not felt during that time on a national level and fertility decisions were not influenced by any policy oriented towards a common goal. Decisions regarding fertility and family size followed the pevailing social customs and practices. However, we find a significant difference between the birth rates of Catholics and other Christian sects in modern days (George, 1965). This could be due to the dogmatic stand of the Catholic Church against artificial methods of contraception. While ideological differences on birth control would not justify the treating of the Christians as a homogeneous group today, it was justifiable in an age when birth control was almost unheard of.

6) Post-independence Data on Religious Groups

It is true that the limitation of data (especially the non-availability of census data simultaneously on the basis of religion and other characteristics after 1941) imposed severe constraints on the empirical analysis of the social demography of Christians in Kerala in the post-Second World War period. However, this does not mean that we have completely ignored the changes that are taking place in the demographic, social and economic spheres among the Christians as well as the followers of other religions. Unfortunately, published information available at our disposal is relatively scanty. Therefore, we had to supplement it with unpublished reports and inferences from studies conducted elsewhere. Some of the conclusions we have drawn, therefore, are of a speculative nature. We admit that this procedure is not strictly scientific. But the justification lies in the fact that the rapid social changes that are taking place in Kerala and India at present and their impact on demographic variables are too important to be neglected.

# V. ANALYSIS AND INTERPRETATION OF DIFFERENTIAL FERTILITY IN KERALA, 1891-1941

This chapter is divided into two major sections. In the first section, we will present the results of the analysis of census data. The second section is devoted to the explanation of the empirical results obtained from the first section.

## A. Analysis of Census Data

Our analysis is primarily concerned with the fertility behaviour [2] of Christians during these fifty years. We are basically looking at the trends and differentials in fertility rates. In order to illuminate the analysis, we have compared the fertility of the Christians with that of the Hindus, the majority community and the Muslims, another significant minority.

Our first attempt is to compute the crude birth rates for these groups from the census data, using the Bogue-Palmore approach described in Chapter IV. The crude birth rate for the three groups estimated from the five indirect fertility measures, ratio of children aged 0-4 to women aged 15-49, ratio of children aged 5-9 to women aged 15-49, percent of total population aged 0-4 years, percent of total population aged 5-9 years, and percent of total population aged 0-14 years, for Travancore and Cochin are given in Table 5.1, 5.2, and 5.3.

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[2] In this study we have concentrated primarily on the fertility component of population dynamics. A brief note on the broad patterns of mortality and migration that existed in Travancore-Cochin and Kerala is given in Appendix B.

These crude birth rates estimated from various indirect measures do not reflect any discernible trends in fertility. Most of the estimates are relatively steady over the period under consideration, except for the ones estimated with the children under five as the numerator of the ratio. In these cases, 1931 shows a significant upward increase in crude birth rates followed by a decline in 1941, for all communities. This is true of both the regions. On the other hand, the estimates based on children 5-9, show a slight decline in rates for 1931. Estimates of crude birth rates based on percentage of population under 15 is the most stable of all. Crude birth rates estimated for the combined Travancore-Cochin region, given in Table 5.4, also show a similar pattern.

Looking at the fertility differences between these three religious groups, we find that, both for Cochin and Travancore, in all census years, the crude birth rates for the Hindus are consistently lower than those for the Christians and the Muslims.

In order to determine whether a combination of these rates would give us a definite trend in fertility behaviour, we have averaged these five rates. These mean rates for both the regions and all communities are given

## TABLE 5.1

## Estimated Crude Birth Rates of Christians from Census Age Distribution for Travancore and Cochin, 1891-1941

| Year | $\frac{C(0-4)}{W(15-49)}$ | $\frac{C(5-9)}{W(15-49)}$ | % of Pop. 0-4 | % of Pop. 5-9 | % of Pop. 0-14 |
|---|---|---|---|---|---|
| | | COCHIN | | | |
| 1891 | 34.0 | 36.7 | 35.5 | 38.7 | 38.9 |
| 1901 | 31.7 | 34.2 | 33.9 | 30.4 | 38.3 |
| 1911 | 34.6 | 34.1 | 36.9 | 36.3 | 38.0 |
| 1921 | 33.7 | 36.4 | 33.3 | 39.0 | 38.4 |
| 1931 | 37.8 | 33.7 | 40.6 | 35.6 | 39.7 |
| 1941 | 30.7 | 33.5 | 33.0 | 36.5 | 36.7 |
| | | TRAVANCORE | | | |
| 1891 | 29.3 | 32.9 | 31.3 | 35.7 | 34.9 |
| 1901 | 31.1 | 35.5 | 33.0 | 38.2 | 37.1 |
| 1911 | 31.7 | 36.3 | 33.1 | 38.4 | 37.4 |
| 1921 | 31.1 | 36.4 | 32.5 | 38.7 | 38.2 |
| 1931 | 40.7 | 36.0 | 42.0 | 36.4 | 40.3 |
| 1941 | 33.1 | 36.5 | 34.0 | 38.1 | 38.1 |

Source: Estimated from Census Data.

## TABLE 5.2

## Estimated Crude Birth Rates of Hindus from Census Age Distribution for Travancore and Cochin, 1891-1941

### COCHIN

| Year | C(0-4)/W(15-49) | C(5-9)/W(15-49) | % of Pop. 0-4 | % of Pop. 5-9 | % of Pop. 0-14 |
|---|---|---|---|---|---|
| 1891 | 28.5 | 29.2 | 32.1 | 33.4 | 33.7 |
| 1901 | 28.0 | 29.6 | 31.2 | 34.9 | 34.7 |
| 1911 | 29.0 | 27.6 | 33.1 | 31.9 | 33.8 |
| 1921 | 26.8 | 29.6 | 32.2 | 36.7 | 35.7 |
| 1931 | 33.2 | 28.7 | 38.1 | 32.7 | 36.6 |
| 1941 | 28.1 | 29.3 | 32.0 | 33.9 | 34.6 |

### TRAVANCORE

| Year | C(0-4)/W(15-49) | C(5-9)/W(15-49) | % of Pop. 0-4 | % of Pop. 5-9 | % of Pop. 0-14 |
|---|---|---|---|---|---|
| 1891 | 24.7 | 26.5 | 27.9 | 30.7 | 30.0 |
| 1901 | 23.6 | 25.1 | 29.4 | 32.6 | 32.0 |
| 1911 | 27.6 | 29.7 | 30.6 | 33.6 | 33.3 |
| 1921 | 27.4 | 30.7 | 29.7 | 34.0 | 33.7 |
| 1931 | 37.1 | 31.3 | 40.3 | 33.4 | 37.5 |
| 1941 | 30.8 | 32.4 | 33.2 | 35.3 | 36.0 |

Source: Estimated from Census Data.

## TABLE 5.3

## Estimated Crude Birth Rates of Muslims from Census Age Distribution for Travancore and Cochin, 1891-1941

### COCHIN

| Year | C(0-4) / W(15-49) | C(5-9) / W(15-49) | % of Pop. 0-4 | % of Pop. 5-9 | % of Pop. 0-14 |
|---|---|---|---|---|---|
| 1891 | 33.8 | 34.1 | 36.8 | 37.3 | 38.0 |
| 1901 | 38.6 | 41.4 | 35.2 | 37.2 | 38.9 |
| 1911 | 37.2 | 32.2 | 36.0 | 35.0 | 37.4 |
| 1921 | 29.7 | 34.6 | 32.0 | 38.1 | 37.5 |
| 1931 | 36.7 | 33.0 | 39.6 | 35.7 | 39.2 |
| 1941 | 29.7 | 32.7 | 32.8 | 36.4 | 36.8 |

### TRAVANCORE

| Year | C(0-4) / W(15-49) | C(5-9) / W(15-49) | % of Pop. 0-4 | % of Pop. 5-9 | % of Pop. 0-14 |
|---|---|---|---|---|---|
| 1891 | 29.3 | 30.3 | 32.2 | 33.6 | 33.4 |
| 1901 | 30.0 | 34.3 | 32.0 | 37.3 | 37.0 |
| 1911 | 31.7 | 35.5 | 33.5 | 38.1 | 37.2 |
| 1921 | 31.0 | 36.0 | 32.3 | 38.2 | 37.6 |
| 1931 | 40.4 | 35.5 | 42.5 | 36.6 | 37.3 |
| 1941 | 34.8 | 36.4 | 36.6 | 38.4 | 39.2 |

Source: Estimated from Census Data.

## TABLE 5.4

Estimated Crude Birth Rates of Christians from Census Age Distribution for Travancore - Cochin, 1891-1941

| Year | $\frac{C(0-4)}{W(.65-49)}$ | $\frac{C(5-9)}{W(.65-49)}$ | % of Pop. 0-4 | % of Pop. 5-9 | % of Pop. 0-14 |
|---|---|---|---|---|---|
| 1891 | 32.3 | 36.4 | 35.9 | 30.5 | 33.8 |
| 1901 | 33.1 | 38.2 | 33.3 | 31.2 | 35.5 |
| 1911 | 35.1 | 39.4 | 39.1 | 32.3 | 35.8 |
| 1921 | 32.4 | 38.6 | 38.4 | 31.2 | 36.4 |
| 1931 | 41.5 | 36.3 | 40.2 | 40.2 | 35.6 |
| 1941 | 33.8 | 37.9 | 37.9 | 32.6 | 36.1 |

Source: Estimated from Census Data.

in Table 5.5. Averaging did not bring forth any new trends, except that they are a little more stable over the years. Both the regions and all communities show a slight decline in crude birth rates in 1941.

Another set of estimates using the Rele technique was derived in order to check the reliability of the Bogue-Palmore technique. We have used two levels of life expectency, $e^{\circ}_{o}=30$ and $e^{\circ}_{o}=40$ in estimating these crude birth rates which are given in Table 5.6.

Both these crude birth rates are higher than all the Bogue-Palmore estimates. However, the difference between the averages of Bogue-Palmore estimates and the Rele technique using the expectation of life 40 years, is not large, although, the latter is higher for all religions and regions. This difference could be due to the inherent underestimation involved in the Bogue-Palmore technique, which the authors themselves point out. The numerical differences that exist between the two Rele rates is about 4 per thousand in favour of the expectation of life at 30.

However, the Rele rates also show the same kind of relationship over the time span under consideration - minor non-directional fluctuation with significantly higher rates for the 1931 census year. Comparing the birth rates of different religious groups, we again note the same pattern ie., for all census years, the Hindu rates are lower than the Christian and the Muslim rates, while

## TABLE 5.5

Average of the Bogue-Palmore Crude Birth Rates for Christians, Hindus and Muslims of Travancore and Cochin, 1891-1941

| Year | Christians | Hindus | Muslims |
|---|---|---|---|
| | | COCHIN | |
| 1891 | 36.7 | 31.8 | 36.0 |
| 1901 | 35.3 | 31.7 | 38.3 |
| 1911 | 36.0 | 31.1 | 34.7 |
| 1921 | 36.1 | 32.2 | 34.4 |
| 1931 | 37.5 | 33.9 | 36.8 |
| 1941 | 34.1 | 31.5 | 33.7 |
| | | TRAVANCORE | |
| 1891 | 32.8 | 28.0 | 31.8 |
| 1901 | 35.0 | 28.6 | 40.0 |
| 1911 | 35.4 | 31.0 | 35.2 |
| 1921 | 35.4 | 31.1 | 35.0 |
| 1931 | 39.1 | 36.0 | 38.5 |
| 1941 | 35.4 | 33.5 | 37.1 |

Source: Estimated from Census Data.

## TABLE 5.6

## Estimates of Crude Birth Rates by the Rele Technique for Christians, Hindus and Muslims, Cochin and Travancore 1891-1941

COCHIN

| Year | CHRISTIANS | | HINDUS | | MUSLIMS | |
|---|---|---|---|---|---|---|
| | e=30 | e=40 | e=30 | e=40 | e=30 | e=40 |
| 1891 | 47.7 | 43.2 | 42.6 | 38.6 | 49.7 | 45.1 |
| 1901 | 45.0 | 40.7 | 43.9 | 36.7 | 57.9 | 52.6 |
| 1911 | 49.0 | 44.4 | 42.8 | 38.7 | 49.0 | 44.4 |
| 1921 | 43.2 | 39.1 | 41.1 | 37.1 | 43.5 | 39.4 |
| 1931 | 51.0 | 46.3 | 47.0 | 42.5 | 52.1 | 47.3 |
| 1941 | 47.4 | 42.8 | 45.0 | 40.7 | 50.0 | 45.3 |

TRAVANCORE

| Year | CHRISTIANS | | HINDUS | | MUSLIMS | |
|---|---|---|---|---|---|---|
| | e=30 | e=40 | e=30 | e=40 | e=30 | e=40 |
| 1891 | 41.6 | 37.6 | 37.3 | 33.6 | 43.7 | 39.5 |
| 1901 | 42.5 | 38.5 | 38.5 | 34.6 | 44.2 | 40.0 |
| 1911 | 43.8 | 39.7 | 40.0 | 36.1 | 45.3 | 38.0 |
| 1921 | 42.5 | 38.5 | 39.3 | 35.5 | 44.2 | 40.0 |
| 1931 | 53.4 | 48.6 | 49.0 | 44.4 | 55.3 | 50.3 |
| 1941 | 42.3 | 38.4 | 41.2 | 37.3 | 46.7 | 42.4 |

Source: Estimated from Census Data.

the differences between the Muslims and the Christians are quite insubstantial.

In order to comprehend the patterns, if any, we have computed the inter-censal population growth rates. The rate of increase for each religion and for both the states as a whole, are given in Table 5.7.

Quite a few noteworthy results follow from the comparative analysis of inter-censal population growth rates. As a religious group, the Christians show the highest percentage increase in both states in all census years, even though the rates for Cochin are lower than those for Travancore. The Muslims have the second highest rate of growth for all years in both the states. The Hindus have a considerably lower rate of increase as compared to the Christians and the Muslims. The higher rate for the Christians and the Muslims could be explained in part by the conversions that took place from Hinduism to Christianity and Islam. The rate of increase for both the states is quite sharp between 1921 and 1931. In 1941, there is a decline in the rate of growth for all regions as compared to 1931, but it does not attain the pre 1931 level. The overall rates of increase for both the regions, are significantly lower than the Christian and the Muslim rates of growth. This is quite understandable as the overall rates are pulled down by the lower rates of the Hindus.

## TABLE 5.7

## Decennial Growth Rates for All Religions, Christians, Hindus and Muslims for Cochin and Travancore, 1891-1941

| Year | All Religions | Christians | Hindus | Muslims |
|---|---|---|---|---|
| COCHIN | | | | |
| 1891-1901 | 11.6 | 13.9 | 10.5 | 17.5 |
| 1901-1911 | 13.8 | 17.6 | 11.1 | 17.1 |
| 1911-1921 | 6.8 | 12.9 | 4.9 | 7.7 |
| 1921-1931 | 23.0 | 26.4 | 20.8 | 28.0 |
| 1931-1941 | 18.0 | 23.4 | 15.0 | 24.2 |
| TRAVANCORE | | | | |
| 1891-1901 | 15.4 | 32.5 | 8.8 | 20.0 |
| 1901-1911 | 16.2 | 29.8 | 12.1 | 19.0 |
| 1911-1921 | 16.8 | 29.8 | 11.7 | 19.4 |
| 1921-1931 | 27.3 | 36.8 | 23.0 | 30.8 |
| 1931-1941 | 19.0 | 22.1 | 13.0 | 22.9 |

Source: Estimated from Census Data.

Employing the technique developed by Bogue which we have discussed earlier (Page 60) the percentage of demographic transition achieved by the three religious groups were computed. The results of these computation are given in Table 5.8.

As in the case of crude birth rates, there are no definite trends in the percentage of demographic transition. Over the years, we find non-directional fluctuations in these percentages. However, the Hindus have achieved a higher percentage of demographic transition as compared to the Christians and the Muslims. Travancore, in most census years, has achieved higher percentage of demographic transition for all communities as compared to Cochin.

From our analysis of the census data, it appears that the Christians have a higher fertility than the Hindus for all the census years examined in both the states. They have completed only a lesser percentage of demographic transition as compared to the Hindus. The important question in this context is, whether the differences between the Hindus and the Christians on these demographic indices are due to religious affiliation or not. We will try to answer this and the other related questions in the next section.

## TABLE 5.8

## The Percentage of Demographic Transition Completed by Christians, Hindus and Muslims for Travancore and Cochin, 1891-1941

### COCHIN

| Year | Christians | Hindus | Muslims |
|---|---|---|---|
| 1891 | 43 | 55 | 44 |
| 1901 | 46 | 56 | 39 |
| 1911 | 44 | 57 | 48 |
| 1921 | 44 | 54 | 48 |
| 1931 | 40 | 50 | 42 |
| 1941 | 49 | 56 | 50 |

### TRAVANCORE

| Year | Christians | Hindus | Muslims |
|---|---|---|---|
| 1891 | 53 | 65 | 55 |
| 1901 | 47 | 63 | 50 |
| 1911 | 46 | 57 | 46 |
| 1921 | 46 | 57 | 47 |
| 1931 | 36 | 45 | 38 |
| 1941 | 47 | 51 | 42 |

Source: Estimated from Census Data.

## B. Explanation of Differential Fertility

In this section, we try to explain and interpret the empirical results presented in the previous section, in the light of world demographic experience and more importantly, in the context of demographic, economic and social factors that operated in Kerala during the time span under consideration. In both, Travancore and Cochin, for all religions, we find a relative stability of crude birth rates except for 1931. In 1931, the birth rates for all religions in both the states were invariably high as compared to the preceeding and the succeeding census years. An examination of the social and economic history of India in general and Kerala in particular does not offer any valid explanation for this unprecedented increase in birth rates. A significant improvement in the efficiency and accuracy in census enumeration techniques seems to be a plausible partial explanation to this phenomenon. It has been pointed out by demographers (eg. Davis (1951) that earlier Indian censuses were characterised by gross under-estimation and under-reporting of ages. The decline of crude birth rates between 1931 and 1941 could be explained by the volatile political situation due to Second World War and the indirect effect of the great depression of the thirties. Overall, the crude rates in Kerala for the subsequent census years are also very high, though they are not cross-classified on the basis of religion.

These high crude birth rates along with relatively high inter-censal rate of growth of population imply, that the state had started the process of demographic transition before 1891. Part of the inter-censal growth rate differences between various religious groups could be explained through the element of conversion that was taking place during this period of time. Here it is important to note that while Hinduism lost its people to other religions especially to Christianity, it did not gain any new members.

While the general trend in fertility could be explained bythe broader political and the demographic conditions that prevailed in the country, how can one explain the differences that exist between groups? The two minority groups, the Christians and the Muslims are characterised by higher crude birth rates and inter-censal growth rates for both regions and all census years, as compared to the majority, the Hindus. Since there is no explicit strictures in the scriptures of any of these religions regarding fertility, it is hard to attribute the numerical difference which we find in the magnitude of demographic indices to religious beliefs. Therefore, we decided to look at the various cultural, economic and social factors that operated in the society for an explanation for these differentials. But we should point out that there are serious methodological problems in dealing with these socio-cultural and economic factors. One is the total absence of empirical data on a number of cultural and social factors. Second, whenever quantitative information is available, its quality is suspect. Therefore, we have to depend to a large extent on speculative explanations and conjectures.

We have utilized the framework developed by Davis and Blake (1954) to explain these fertility differentials. The process of human reproduction according to them, involves three steps: intercourse, conception and gestation. The nature of a society affects fertility through a number of intermediate variables related to these steps. A summary of these intermediate variables, following Davis and Blake, is given below.

1. Intercourse Variables

A.(1) Age of entry into sexual unions

(2) Permanent celibacy

(3) Amount of reproduction period lost due to divorce, separation, desertion or death of the spouse

B.(4) Voluntary abstinence

(5) Involuntary abstinence

(6) Coital frequency excluding abstinence

II. Conception Variables

(7) Fecundity or infecundity as affected by involuntary causes

(8) Use or non-use of contraception through mechanical, chemical, or other means

(9) Fecundity or infecundity as affected by voluntary causes

III. Gestation Variables

(10) Foetal mortality from involuntary cause

(11) Foetal mortality from voluntary cause

The fertility behaviour of a society depends on the sum total of the positive and negative influences of these variables.

A comparative analysis of the Christians and the Hindus in Kerala along these lines is attempted below. Variables like involuntary abstinence, fecundity or non-fecundity due to involuntary causes affect both groups similarly. Contraception using mechanical, chemical or other means was not practiced to any significant extent by either groups during the period under consideration. Thus, the impact of conception and gestation on both communities would likely be the same.

Since pre-marital sexual intercourse and illegitimate births were not encouraged by any of the communities under examination, we are justified in equating the "age of entry into sexual union" to "age at first marriage".

Estimates of singulate mean age at first marriage, generated for males and females, for both the Christians and the Hindus, for Travancore are given in Table 5.9.

### TABLE 5.9

### Singulate Mean Age at First Marriage for Christians and Hindus by Sex, Travancore, 1891-1941

| | CHRISTIANS | | HINDUS | |
|---|---|---|---|---|
| Year | Male | Female | Male | Female |
| 1891 | 20.5 | 16.1 | 23.7 | 17.5 |
| 1901 | 20.7 | 15.8 | 23.8 | 18.0 |
| 1911 | 20.8 | 16.3 | 24.3 | 17.8 |
| 1921 | 22.0 | 16.5 | 25.2 | 17.7 |
| 1931 | 21.9 | 17.3 | 24.7 | 17.7 |
| 1941 | 24.5 | 19.6 | 25.3 | 19.3 |

Source: Estimated from Census Data.

Similar estimates for Cochin are given in Table 5.10. These estimates are based on percentage of single population between ages 10 and 55, following Hajnal (1953). The Christian mean age at marriage for both sexes is slightly lower than that of the Hindus. The mean age increases slightly over the years for both groups. This is true of both Cochin and Travancore. In order to determine whether there is a difference between the whole Christian community and a part thereof, we have compared these mean ages with the mean ages computed from the ecclesiastical registers of a Christian Parish, St. Mary's Church, Changanacherry, Kerala (Krishnan, 1977). Average age at marriage for five birth cohorts (1830-1879), is given in Table 5.11. The census estimates are higher than the parish averages, both for men and women. This difference could be due to the fact that the census estimates are only approximations of the actual values. On the other hand, the parish average, since it is based on the information of single parish, may not represent the entire community. Difference in time periods under consideration could be another significant factor in expanding the varying ages at first marriage. A comparison of the average age at first marriage with that of Christians in Goa, between 1860 and 1930 as reported by Srivastava (1972), is given in Table 5.12, shows that for both Goan males and females, age at first marriage is higher. Higher

## TABLE 5.10

### Singulate Mean Age at First Marriage for Christians and Hindus by Sex, Cochin, 1891-1941

| | CHRISTIANS | | HINDUS | |
|---|---|---|---|---|
| Year | Male | Female | Male | Female |
| 1891 | 20.7 | 15.9 | 22.2 | 15.7 |
| 1901 | 22.3 | 17.4 | 24.3 | 18.5 |
| 1911 | 21.6 | 15.4 | 23.5 | 17.3 |
| 1921 | 23.0 | 18.0 | 25.2 | 18.1 |
| 1931 | 23.4 | 18.8 | 23.7 | 17.1 |
| 1941 | 25.5 | 21.0 | 25.3 | 18.6 |

Source: Estimated from Census Data.

## TABLE 5.11

### Average Age At Marriage for Birth Cohorts in St.Mary's Parish, Changanacherry, Kerala

| | Female | | Male | |
|---|---|---|---|---|
| Cohort | Cases | Mean | Cases | Mean |
| 1870-1879 | 107 | 14.7 | 50 | 17.6 |
| 1860-1869 | 113 | 14.2 | 112 | 19.4 |
| 1850-1859 | 76 | 14.9 | 90 | 20.1 |
| 1840-1849 | 39 | 15.4 | 65 | 20.2 |
| 1830-1839 | 18 | 14.0 | 28 | 20.4 |

Source: Krishnan, 1977

## TABLE 5.12

### Age At First Marriage of Brides and Bridegrooms in Different Decades for Goa

| Year | Brides | Bridegrooms |
|---|---|---|
| 1860-1869 | 18.8 | 30.5 |
| 1870-1879 | 19.0 | 27.3 |
| 1880-1889 | 19.4 | 26.7 |
| 1890-1899 | 17.8 | 25.9 |
| 1900-1909 | 18.3 | 26.0 |
| 1910-1913 | 18.8 | 27.3 |

Source: Srivastava, 1972.

Goan age at marriage could be due to greater assimilation of Western culture and other socio-economic factors.

The percentage of women not entering marriage, is slightly higher for the Christians as compared to the Hindus, for most of the census years considered. The percentage of single women at the age of 50 for both communities and states is given in Table 5.13. The difference between the two religious groups is too small to affect the fertility.

Since Christian marriages are stable, the amount of reproductive period lost due to divorce, separation or desertion is comparatively low. In other words, the Christian women are exposed to sexual intercourse for a longer time. This is true of Hindu marriages as well. However, living arrangements under matriarchal system reduces the frequency of cohabitation between the wife and the husband for those communities where this is practiced. The Christian woman lost less time during the reproductive period, because widow remarriage was common among the Christians than among most of the Hindus.

Within marital union, voluntary abstinence was less frequent in the case of the Christians than of the Hindus. Both the Christians and the Hindus practiced post-partum abstinence, however, the Hindus had more religious holy days in which sexual intercourse was prohibited. The coital frequency was expected to be generally high among

## TABLE 5.13

## Percentage of Single Women at Age 50 for Cochin and Travancore by Religious Groups, 1891-1941

COCHIN

| Year | Christians | Hindus |
|---|---|---|
| 1891 | 2.9 | 3.5 |
| 1901 | .8 | 1.4 |
| 1911 | 1.5 | 1.0 |
| 1921 | 2.2 | 1.3 |
| 1931 | .3 | 1.0 |
| 1941 | 2.5 | 1.2 |

TRAVANCORE

| Year | Christians | Hindus |
|---|---|---|
| 1891 | 4.5 | 8.2 |
| 1901 | 1.3 | 11.6 |
| 1911 | 5.4 | 2.2 |
| 1921 | 5.4 | 6.8 |
| 1931 | 1.3 | 1.4 |
| 1941 | 1.2 | 1.0 |

Source: Estimated from Census Data.

the Christians due to the existence of more nuclear families. Krishnan's research on the Christian population of St.Mary's Parish at Changanacherry (unpublished) gives supporting evidence to this contention. On the other hand,a number of Hindu sects followed the joint family system. The absence of privacy in a joint family might have reduced coital frequency within marital unions.

Thus, we see that in most of the variables affecting intercourse, the Christians had a higher positive value than the Hindus and this could be cited as a cause for their higher birth rates. In this context, the observation by Kingsley Davis (1951) about the Indian Christians in general, seems to be appropriate. He is of the opinion that the Indian Christians have abandoned many of the birth limiting practices of the Hindus without yet adopting the Western pattern of birth control.

In addition to the cultural, there are economic and social factors that affect fertility. On the economic front, most of the Christians belonged to the agricultural middle or lower class. In a non-mechanised rural agricultural society, economic prosperity depended on maximum land under cultivation. This required more manpower and in this context, more children, especially male children, could prove to be a positive asset. Early marriage might have been a societal response to this need. Thus, children as productive agents, and related sex preference, could have contributed towards the high fertility of the Christians.

As compared to the Christians, more Hindus were engaged in non-agricultural pursuits. As we have mentioned earlier in Chapter II, the term "Hindus" refers to an amalgam of innumerable sub-sects and only a section of the community was involved in agricultural operations. The highest class of Hindus, the Brahmins, were principally priests, landlords and scholars. The Kshatriayas, the next class formed the ruling class in the political sense. Kerala was practically thin in the trading class of Vaisyas. Sudras, the last class, engaged in range of occupations including army service, farming and other trades.Thus the pressing demand for man power in agriculture is felt only by a section of the Hindus. However, it should be emphasized at this point that the difference between the Hindus and the Christians in agricultural participation was a matter of degree. Proportionately more Christians were in agriculture but their absolute numbers were considerably lower than that of the Hindus.

The level of literacy is considered to be an important variable inversely affecting fertility. An examination of the level of literacy for the three religious groups, given in Tables 5.14 and 5.15, show that the Christian males and females achieved higher levels of

## TABLE 5.14

### Level of Literacy per 100 by Religion and Sex for Travancore 1901-1941

| Year | Religion | Persons | Male | Female |
|---|---|---|---|---|
|  | Christians | 15.8 | 25.9 | 5.3 |
| 1901 | Hindus | 11.7 | 20.8 | 2.5 |
|  | Muslims | 8.6 | 15.8 | 1.1 |
|  | Christians | 18.4 | 28.6 | 7.8 |
| 1911 | Hindus | 14.2 | 24.2 | 4.2 |
|  | Muslims | 9.4 | 17.1 | 1.3 |
|  | Christians | 30.4 | 37.8 | 22.7 |
| 1921 | Hindus | 22.6 | 32.4 | 12.7 |
|  | Muslims | 12.8 | 20.6 | 4.3 |
|  | Christians | 29.4 | 38.0 | 20.7 |
| 1931 | Hindus | 22.4 | 33.1 | 11.8 |
|  | Muslims | 11.9 | 20.9 | 2.5 |
|  | Christians | 55.5 | 63.1 | 48.0 |
| 1941 | Hindus | 47.2 | 58.9 | 33.2 |
|  | Muslims | 47.1 | 58.0 | 36.0 |

Source: Estimated from Census Data.

### TABLE 5.15

### Level of Literacy per 100 by Religion and Sex for Cochin 1901-1941

| Year | Religion | Persons | Male | Female |
|---|---|---|---|---|
|  | Christians | 17.4 | 27.2 | 7.3 |
| 1901 | Hindus | 12.7 | 21.8 | 3.9 |
|  | Muslims | 6.7 | 12.5 | .6 |
|  | Christians | 21.5 | 31.4 | 11.3 |
| 1911 | Hindus | 13.6 | 22.8 | 4.7 |
|  | Muslims | 7.4 | 13.8 | .7 |
|  | Christians | 26.2 | 33.2 | 17.3 |
| 1921 | Hindus | 16.5 | 25.5 | 7.9 |
|  | Muslims | 8.5 | 15.3 | 1.5 |
|  | Christians | 40.1 | 48.0 | 32.4 |
| 1931 | Hindus | 24.7 | 35.8 | 14.2 |
|  | Muslims | 13.7 | 23.0 | 4.1 |
|  | Christians | 55.4 | 63.3 | 47.7 |
| 1941 | Hindus | 36.8 | 49.1 | 25.4 |
|  | Muslims | 23.2 | 35.6 | 10.4 |

Source: Estimated from Census Data.

literacy as compared to both the Hindus and the Muslims. However, this is unlikely to affect the fertility behaviour of the Christians in the period under consideration because, literacy primarily affects fertility through contraception. As we have already mentioned, voluntary use of contraception was practically unheard of during this period. It is true that the level of literacy affects age at marriage and the extent of permanent celibacy. But in the case of Kerala, for the period under consideration, the effects of both these appear to be slim.

Thus, we see that the fertility differentials that exist between the Christians and the Hindus in Kerala, are not really dependent on religious affiliation. Actually, the cultural institutions, created by the socio-economic necessities of different times are responsible for the differentials.

Finally, it should be pointed out that the result of attempt to estimate the percentage of completed demographic transition using the Bogue (1969) formula was not very enlightening or instructive. Since these percentages are computed from general and total fertility rates obtained from crude birth rates, depending on the fluctuations of the crude birth rates, these percentages also vary. Inclusion of mortality indices into the computing formula might improve the results and make them more meaningful.

# VI. A COMPARISON OF TRENDS IN DEMOGRAPHIC TRANSITION IN INDIA AND KERALA

In this chapter, we shall evaluate the results obtained from the analysis of census data in the overall Indian context. We shall also briefly look at the population trends in India in general and Kerala in particular for the past three decades.

One broad similarity between all India and Kerala trends is the lower fertility of the Hindus, as compared to the Muslims and the Christians. Kingsley Davis' (1951) classic study shows that among these three religious groups, the Christians have the highest fertility, immediately followed by the Muslims and the Hindus with a considerably lower fertility rate. In the case of Kerala, fertility rates of the Christians and the Muslims were very close for most of the census years considered here. In Travancore, the Muslims had a slightly higher fertility than the Christians, but the trend is reverse in the case of Cochin. However, one must add that the differences in most cases are very small. But for both the states, the Hindu rates are consistently and considerably lower than those for the Muslims and the Christians. The principal reason for the lower Hindu fertility, according to Davis is the absence of widow remarriage. However, he notes that the marital fertility among the Hindus is considerably lower than that of the Christians and the Muslims. Davis also admits the existence of a number of socio-economic and cultural factors which affect fertility differentially and when these factors are controlled, the differentials between various religious groups may not be as pronounced as the original figures show.

Two important reasons Davis suggests for the higher marital fertility of the Christians are the fact that a good number of them are converts from the lower classes of society and their failure to adopt modern birth limiting practices, once they have abandoned the traditional "social controls" on birth practiced by the Hindus. How far these general contentions are true with regard to Kerala is open to question. The fertility of Christians could also partly be explained by economic factors (eg. occupation) and social factors (eg. the existence of nuclear family).

Decennial growth rates for India, Travancore and Cochin, for the six decades from 1891-1941 are given in Table 6.1. For India as a whole, we find sporadic growth up to the census of 1921, when higher growth rates alternated with negligible increase in population. Adverse socio-economic conditions, which affected mortality significantly (in the upward direction) are responsible for the growth rates during the decades of 1891-1901 and 1911-1921. The former decade (1891-1901) was affected by a devastating famine while the latter (1911-1921) was

## TABLE 6.1

### Decennial Rate of Growth of Population in India, Travancore and Cochin, 1891 - 1941

| Decade | India | Travancore | Cochin |
|---|---|---|---|
| 1891-1901 | 1.0 | 15.4 | 11.6 |
| 1901-1911 | 6.1 | 16.2 | 13.8 |
| 1911-1921 | 0.9 | 16.8 | 6.6 |
| 1921-1931 | 10.6 | 27.3 | 23.0 |
| 1931-1941 | 15.0 | 19.0 | 18.0 |

Source: Computed from the Census data; Davis (1951).

characterized by the First World War and a great influenza epidemic. However, there is a definite upward trend in growth rates since 1921. But when we compare these all India rates with those of Travancore and Cochin, we notice quite a different trend. Decennial growth rates for Travancore remained steady around 16% until 1921. The decade of 1921-1931 shows a pronounced upward swing in growth rates, as compared to previous decades. This bulge is partially explained by improved enumeration techniques, which eliminated considerable under-enumeration that existed in earlier censuses. The decade of 1931-1941 shows a decline in growth rates as compared to the previous decade. This may be attributed to the recruitment of people for the Second World War and the migration to Burma and Malaya as well as other parts of India. More or less similar, but slightly lower rates are found for Cochin for the period under consideration except for the decade of 1911-1921, during which time the growth rates are lower as compared to other decades. Even in this decade, the Cochin rate is considerably higher than the overall Indian rate of growth.

For an explanation of these differing trends in population growth between India and Kerala, we have to examine the socio-economic history of Kerala. Owing to its unique geographic location and climatic condition, Kerala was less prone to droughts and the consequent famines as the rest of India. Kerala was relatively free from epidemics which caused a large number of deaths in other parts of India. Another possible reason for high growth rate is the relatively low infant mortality in Kerala. Superior sanitation and hygienic standards could be cited as an important cause for generally lower mortality.

Does this mean that Kerala is one step ahead of India in the process of transition? One is tempted to answer this question affirmatively. The traditional socio-economic indicators of transition, like improvement in the standard of living, higher levels of literacy, lower or falling death rates, were present in Kerala earlier than in any other parts of India. The birth rates in Kerala remained as high as the rest of India even in the last quarter of the 19th century. However, the death rates were considerably lower than the all-India rates(see appendix B). This implies that mortality decline, the leading characteristic of early transition period, started in Kerala as early as the last quarter of the 19th century. Various aspects of social development (not necessarily economic) like increase in literacy, improvement in hygiene and public health accounted for this early decline in mortality. These improvements reduced mortality in general and infant and child mortality in particular. The resultant of this phenomenon of high fertility and low mortality was high rate of natural increase which was prevalent in Kerala as early as 1881. The rest of India had to wait another three or four decades for a significant mortality decline and a consistently higher rate of natural increase. The tendency for India as a whole started as late as the twenties of the present century. In the meantime, the mortality rate in Kerala was steadily declining and with fertility rate still high, the rate of natural increase continued to climb upwards. The tendency towards a reverse trend started only by the early sixties. For the rest of India, decline in rate of natural increase started only by the late sixties. But even today, judging from the 1971 census and the later Sample Registrations, the rate of natural increase remains high both for India and Kerala. Crude birth and death rates for India and Kerala based on a three year moving average are given in Table 6.2.

These data are quite revealing as there is nearly a seven point difference in both crude birth and death rates between India as a whole and Kerala. Yet, the rate of natural increase remains more or less the same for both the units under comparison.

We have pointed out some factors that contributed to the decline of mortality in Kerala in the last 100 years. Now, we have to examine a few factors which are responsible for the decline in fertility. One important conventional factor is the level of literacy which is

TABLE 6.2

Crude Birth and Death Rates for India and Kerala From 1970 to 1976

| Year | India | | Kerala | |
|---|---|---|---|---|
| | CBR | CDR | CBR | CDR |
| 1970-72 | 37.2 | 16.1 | 31.3 | 9.1 |
| 1971-73 | 36.3 | 15.9 | 30.5 | 8.9 |
| 1972-74 | 35.3 | 15.7 | 29.0 | 8.5 |
| 1973-75 | 34.8 | 15.3 | 28.0 | 8.2 |
| 1974-76 | 34.4 | 15.0 | 27.6 | 8.1 |

Source: Sample Registration, 1978.

considered to be a very important index of social development. Between Kerala and the rest of India, there is a marked difference in the level of literacy in the past as well as present. Literacy rates (percentage) for India, Travancore and Cochin from 1901-1941 are given in table 6.3. and the comparative figures for India and Kerala in 1971 in table 6.4.

In comparing Travancore, Cochin and India, we find that while Travancore and Cochin have similar rates both for male and female, all India rates are much lower than these. This is particularly significant in the female literacy area. According to 1971 data undifferentiated literacy rates for all persons are twice as high in Kerala as compared to the rest of India. Male rates are 27 percentage points higher in Kerala while female rates are three times as high in relation to the all India rates. Differentiating between rural and urban residents, the rural male in Kerala is twice as literate as the average rural Indian male.

The rural females in Kerala are four times as literate as their Indian counter parts. This is quite significant from the stand point of fertility in India where rural population far exceeds urban residents. The urban rates are also considerably higher in Kerala both for males and females, though the difference is not very high.

### TABLE 6.3

Literacy Rate (Percentage) for Travancore, Cochin and India
1901-1941 by Sex.

| Year | TRAVANCORE | | COCHIN | | INDIA | |
|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female |
| 1901 | 21.5 | 8.1 | 22.4 | 4.5 | 9.8 | .7 |
| 1911 | 24.8 | 5.0 | 24.3 | 6.1 | 10.6 | 1.1 |
| 1921 | 33.1 | 15.0 | 27.4 | 9.9 | 12.2 | 1.8 |
| 1931 | 33.8 | 13.9 | 38.3 | 18.5 | 15.6 | 2.9 |
| 1941 | 58.1 | 36.0 | 52.0 | 30.6 | N.A. | N.A. |

Source: Computed from Census Data.

### TABLE 6.4

### Literacy Rate (Percentage) for India and Kerala by Sex and Rural-Urban Residence, 1971

| | Persons | Male | Female |
|---|---|---|---|
| **INDIA** | | | |
| Total | 29.5 | 39.5 | 18.7 |
| Rural | 23.7 | 33.8 | 13.2 |
| Urban | 52.5 | 61.3 | 42.3 |
| **KERALA** | | | |
| Total | 60.4 | 66.6 | 54.3 |
| Rural | 59.3 | 65.7 | 53.1 |
| Urban | 66.3 | 72.0 | 60.6 |

Source: Census of India, 1971.

Lower fertility and mortality in Kerala, curiously enough, is not due to major industrial or economic development. Labour force participation in the secondary sector of the economy is not significantly higher than the all-India average as is clear from Table 6.5. However, tertiary sector has 10% more workers in Kerala, as compared to India. Per capita income in Kerala is not much different from that of India either. (Rs. 579/ for Kerala as compared to Rs. 661/ for India in 1971-72). The above information supports the conjecture that social transformation in Kerala took place without significant upward leap in economic development.

The extent of success achieved in family planning, among other things, is a measure of the degree of social progress attained by Kerala. Various sample surveys in family planning report that Kerala is in the forefront in family planning. During the sixties when family planning was stressed in India's five year plans, Kerala had the highest percentage of adopters of I.U.D. (Nair, 1978). Similarly, during the early seventies when vasectomy was emphasised as the most effective birth control technique, Kerala had, again, the highest proportion of people vasectomized. Various vasectomy camps held in different parts of Kerala were well known in family planning literature (Krishna Kumar, 1972, Valsan, 1977). A comparative analysis of KAP studies conducted in Kerala

## TABLE 6.5

Labour Force Participation (Percentages) in Sectors of Economic Activity for India and Kerala, 1971

| Sector of Activity | India | Kerala |
|---|---|---|
| Primary Sector | 72.6 | 56.0 |
| Secondary Sector | 10.7 | 17.5 |
| Tertiary Sector | 16.7 | 26.6 |

Source: Census of India, 1971.

and elsewhere (Nair, 1978) shows that population of Kerala is characterised by better knowledge, positive attitude and frequent use of modern contraceptives and other fertility limiting practices. They have greater degree of sensitivity towards the publicity and information campaigns conducted by various public agencies on family planning and other development programs, probably due to higher level of social awareness. Dynamic leadership provided by a few administrators is also considered to be a reason for the success of family planning in Kerala.

One apparent puzzle is the existence of high rate of natural increase in Kerala, despite the success of family planning. It appears that while family planning eliminated almost all "unwanted births", the demand for children despite the declining trend is still high. As Mamdani (1973) points out the high demand for children springing from various economic, social and institutional factors manifests itself in relatively large "ideal size" of the family. The existence of very low mortality level also partly explains the high rate of natural increase.

The emergence of social attitudes, institutions and economic conditions which are conducive to lower demand for children, could in many cases take a long period of time as Leibenstein (1957) points out. Decline in the percentage of labour force in agriculture and increase in the proportion of workers in the tertiary sector, as shown by the 1971 census data (Table 6.4), may be indicators of the process of change that is already under way.

There is also a possibility that desired changes in the demand for children could be brought about without achieving the conventional level of social, institutional and economic advancement through a program of publicity, incentives and curbs. True, this is a kind of forced change, but such changes have occurred frequently in history. The Chinese program of population control is a relevant example. If this can happen, there is hope for a drastic reduction in the rate of natural increase in Kerala. But, will it happen in the near future? If it doesn't, Kerala has a long way to go to complete the demographic transition.

# VII. SUMMARY AND CONCLUSIONS

In this chapter we summarize the broader findings of the present research and indicate a few possible directions for future research. In addition, the likely contribution of our work to the social demography of India is also mentioned.

## A. Summary of the Thesis

We have estimated the birth rates of the Christians through a variety of techniques and found them higher than the overall rate for Travancore and Cochin. A comparison of the Christian rates with the Hindu and the Muslim rates show that the Hindu rates are consistently lower than the Christian rates, while the Muslim and the Christian rates are more or less identical. Superficially, these results are contradictory to what we expected on the basis of conventional theory. However, when a series of socio-economic variables like, occupational distribution, pattern of marriages and social customs were introduced into the picture, the differences could be accounted for. In view of the absence of sufficient numerical information on these scores, we were unable to perform statistical controls on these variables. The general conclusion following from the established sociological conceptualizations is that the differences found between the Christians and the Hindus may not be significant if one controls for the differences in socio-economic status. Our conclusion is further supported by the fact that the adherents of different religions in Kerala spring from the same ethnic and cultural background, unlike in the case of many a study in the literature, where religious differences coincide with ethnic and cultural differences. All the major religions in Kerala under study come from the same homogeneous population despite the fact that conversion took place at different times. In spite of the differences in religious faith and rituals, the social customs and norms remained more or less the same. Demographic norms like the size of the family and the age at marriage depended more on these social customs and economic necessities.

Considering demographic indices of birth, death and rate of increase in Kerala based on pre 1941 census data, we find high birth rates, relatively low death rates and high rates of growth. In order to examine the level of demographic transition achieved, we compared these rates to all India rates and found that while birth rates were comparable, death rates were considerably higher for India as a whole. As a result of this, the rate of growth of population for India remained relatively low as compared to Kerala. A comparison of the current rates shows that the rate of growth is identical between these two units of analysis. However, we see that crude birth and death rates are considerably lower in Kerala as compared to India. In fact, of all the states, Kerala has the lowest crude birth and death rates in India at the present time. All these indicate that Kerala is leading in the process of demographic transition in India.

Another important aspect of social change to which we gave particular attention is the level of literacy. For all the census years examined, we find that the Christians have a higher rate of literacy for both males and females followed by the Hindus and the Muslims. This could be attributed primarily to the intense effortsof the local rulers and the Christian missionaries. A comparison of the percentage of literate persons in Kerala is almost twice as that of the all India rate. This is true not only of the period under study but also of the subsequent period, as revealed by later census figures.

Owing to higher level of literacy, the proportion of Christians in service sectors has increased over the years. A comparative study of Kerala and India would show that Kerala has proportionately more people in the tertiary sector. But it should be pointed out that due to the absence of a solid industrial base, the proportion of population in the secondary (manufacturing industries) sector, though higher than the all India average is not very high.

Thus our research establishes two important facts.

First the influence of religion on fertility is not very significant. The numerical differences we find between the crude birth rates of various religious groups are due to the influence of social, cultural and economic factors. Secondly, Kerala as a state seems to be the leader in the process of demographic and social change in India. An important fact to be noted in this context is that Kerala achieved a significant decline in birth and death rates and a high degree of social change despite the unfavourable economic circumstances. In other words, contrary to conventional theories of socio-demographic change, Kerala has achieved and is still achieving, change without concomitant economic development or industrialization. This last result particularly is important in the developmental context of India. Conventional theories relating economic development to demographic change emphasise that without achieving a certain level of economic development, demographic change, especially decline in fertility, is almost impossible to be achieved. In the case of countries like India, achieving this critical minimum of development appears to be quite a difficult endeavour. The example of Kerala shows that demographic and social change can take place without even gaining access to this minimum economic threshold. Expansion of education health and family planning services along with redistribution of land, are some of the policy measures which aided this process (Krishnan, 1980). This finding is likely to give added impetus to family planning efforts in India because it might convince planners and administrators that at least a part of the desired change in fertility level could be achieved through social development and family planning without marked economic advancement. One should add at once, that this argument does not de-emphasize the role of economic development. It just shows that social development is possible, at least in some cases, without economic development.

## B. Contributions to Theory and Policy

By focussing on the social, cultural, economic and institutional factors which determine demographic behaviour, we hope, our study has explained differentials that exist between religious groups. It is customary on the part of a good number of Western and Western trained demographers to blame the high fertility level prevailing in India on religion. Religion is a convenient proxy for those who do not want to study the interaction of innumerable variables in a cultural complex. We have been able to show, at least partially that it is the socio-economic circumstances and not religion per se that is responsible for fertility differentials. Low level of socio-economic development, extreme dependence on agriculture, use of primitive technology, practice of outmoded social customs, are some of the factors contributing to the high fertility in Kerala as well as India.

Our study, it is hoped, will initiate further studies in the historical demography in India. Even though historical demography is a rapidly growing branch of demography in the West, there are only very few studies conducted in historical demography in India. Our study of Kerala demography in general, and Christian demography in particular, is an attempt at understanding a part of the Indian population from a historical perspective. If such studies are conducted on other parts of India and other religions, it will definitely lead to a better understanding of the total demographic situation in India. Besides enriching Indian demography, it will help Indian policy-makers in devising population policies particularly suited to Indian conditions.

### C. Suggestions for Future Research

Since our study has a historical as well as a current aspect, future research ideas related to it also fall into two categories. From the historical point of view, the one area in which additional explorations are worthwhile is to go back to thepast before 1891. We could not do this due to the non-availability of data. However, given time and resources, one can collect data from non-conventional sources like parish registers and conduct an elaborate study following Srivastava (1972) and Krishnan (1977). This will enable us to have a longer view of the basic demographic processes characterising the Christians in Kerala. Such a study in fact, coud be extended to cover the Christians all over India if sufficient data could be gathered.

We were unable to bring our research to the present time due to the non-availability of demographic information on the basis of religion. It would have been useful from the theoretical and the practical perspectives to follow the trend for a hundred year period. However, this could be done through a sample survey, provided we have sufficient resources and time. Such a survey could also be used to collect information which is not available from current or previous censuses like the differences between sub-groups in each religion. One sample study (George, 1965), has noted significant differences between Catholics and non-Catholics in Kerala. At an earlier time period, this kind of differentiation between religious sub-sects was practically unimportant due to the absence of artificial birth control practices. However, with the increased use of artificial contraceptive practices, differences between different Christian sects become important. This is particularly true in the case of

Catholics whose religious leaders have taken a definite position against all kinds of artificial contraceptive practices.In comparison to other Christian sects, the Catholics in Kerala seldom question the dictates of their Church. Similarly we may analyse the fertility differences between the different Hindu castes as well. Here it should be emphasized that this differential behaviour between groups is only a transitory phenomenon during the process of demographic transition. Evidence gathered from North America and other advanced societies shows that as a society moves towards demographic maturity, fertility behaviour of different groups converge. This convergence could be due to the equality in the level of social development achieved by different groups.

Another important variable we were forced to neglect was income. A unique relationship between income and fertility has not yet been established in the literature. There is no agreement on the nature of their relationship either among demographers or economists. Various studies conducted in different parts of the world came up with contradictory conclusions. David Heer (1972) has suggested a compromise to these opposing views by arguing that while the direct effect of increase in income is an increase in fertility, its indirect effect through education and other social variables is negative. The net effect of these positive and negative influences depends on many other economic and socio-cultural variables. Friedlander and Silver (1967) have shown that the effect of income on fertility differs according to the level of economic development achieved by the country concerned. In the context of this continuing controversy, it would be interesting to learn the nature of relationship that exists between these variables in Kerala and India. A sample study would be helpful in analysing this relationship.

Socio-economic status, as opposed to income alone, is another variable whose relationship to fertility we could analyse through a sample study. It is commonly agreed among the demographers that the whole socio-economic complex is more important in determining fertility than income taken by itself. By devising a suitable index of socio-economic status, its relationship to fertility could be easily analysed.

Analysis on these lines incorporating income and socio-economic status will enable the researcher to test some of the economic theories of fertility like the ones put forward by Leibenstein(1957) and BecKer(1960) and determine whether they are applicable in the case of underdeveloped countries. These results definitely will be of immense value to policy-makers.

Another possible variable we could study in detail through a sample survey is migration. In the context of

Kerala, migration especially external migration, is very important. External migration from Kerala is of two types: migration within India and migration outside the country. Patterns of these migrations are important from demographic, economic and sociological perspectives. Since Kerala has a high level of literacy, a very high population density and a high level of unemployment, the most exportable commodity is human being. In the past 30 years, out-migration from Kerala has been increasing at a high rate. From the demographic point of view, fertility is affected by this migration through its impact on sex ratio. The monetary remittances from those migrants from within and outside India have a profound impact on the economy of Kerala. This is especially true of the foreign exchange coming into the state, particularly from the Middle East. Within a short time, this phenomenon has altered the entire economic picture of the state. This increase in the supply of money without matching increase in production, has caused a high rate of inflation. Most of this money is used for "unproductive" investments in land, gold and residential housing. Sociological significance of migration in the context of Kerala is multi-faceted. The foreign exchange flow has increased the gap between the rich and the poor. Contact with the outside world has led to large scale "demonstration effect" on the part of people of all walks of life.

However, it should be noted that in some areas this outflow of man power has changed the nature of stratification by enabling the poor to work abroad and become rich. It also has been instrumental in introducing certain values which are conducive to social and economic development. The full social, economic and demographic impact of migration could be studied through a well designed sample survey. This also will be of considerable value to socio-economic planners.

All these imply that this study is only a humble beginning and the state of Kerala and its population forms a valuable subject for further fruitful research.

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# APPENDIX A EVALUATION OF CENSUS DATA

Inorder to check for the stability of population and the quality of data, we have computed the age ratios and the age distributions for both Travancore and Cochin for three census years, 1891, 1921 and 1941. They are given in table A.1, A.2 and A.3. A comparative look at the age distribution in A.3 shows the absence of any radical change in the pattern of age distribution which implies relative stability for population over the years.

However, it should be noted that there are significant fluctuations in the age ratios in the same year for both females and males. For all the years analysed here, age groups 15-19, 20-24, 30-34, 40-44, 45-49, the age ratios are considerably lower than other age groups for both sexes. This implies a systamatic distortion. Cultural beliefs and taboos regarding age reporting could be an important reason for this phenomenon. For a more detailed discussion on age mis-reporting, particularly with reference to the data on India, U.N. monograph on Methods of Estimating Basic Demographic Measures from Incomplete Data,(Manual IV, 1964) may be consulted.

In addition, we have also computed the index of dissimilarity using the percentage distribution of female population in each age groups for both states for 1891, 1921 and 1941 which is given in table A.3 and A.4. Indexes of dissimilarity in all cases are relatively small, 2.79 and 3.15, which implies that the population distribution has not changed significantly over the period of time under consideration.

## TABLE A.1

### Male and Female Age Ratios for Travancore 1891, 1921 and 1941

|  | 1891 |  | 1921 |  | 1941 |  |
|---|---|---|---|---|---|---|
| Age Groups | M | F | M | F | M | F |
| 0-4 | - | - | - | - | - | - |
| 5-9 | 1.058 | 1.089 | 1.030 | 1.046 | 1.002 | 1.017 |
| 10-14 | 1.114 | 1.014 | 1.128 | 1.059 | 1.082 | 1.053 |
| 15-19 | .899 | .932 | .874 | .920 | .946 | .960 |
| 20-24 | .904 | .958 | 1.094 | .995 | .957 | .979 |
| 25-29 | 1.129 | 1.133 | 1.085 | 1.089 | .998 | .999 |
| 30-34 | .901 | .929 | .899 | .910 | .989 | .996 |
| 35-39 | 1.148 | 1.021 | 1.127 | 1.042 | 1.022 | 1.013 |
| 40-44 | .965 | .982 | .928 | .982 | .981 | .969 |
| 45-49 | .933 | .918 | 1.031 | .956 | 1.008 | 1.018 |
| 50-54 | 1.055 | 1.088 | 1.017 | 1.099 | .983 | .960 |
| 55-59 | - | - | - | - | - | - |

Source: Estimated from Census Data.

## TABLE A.2

### Male and Female Age Ratios for Cochin 1891,1921 and 1941

| Age Groups | 1891 | | 1921 | | 1941 | |
|---|---|---|---|---|---|---|
| | M | F | M | F | M | F |
| 0-4 | - | - | - | - | - | - |
| 5-9 | 1.023 | .999 | 1.043 | 1.032 | 1.002 | .996 |
| 10-14 | 1.104 | 1.017 | 1.112 | 1.080 | 1.075 | 1.058 |
| 15-19 | .903 | .907 | .890 | .868 | .965 | .972 |
| 20-24 | .906 | .993 | .973 | .987 | .973 | .978 |
| 25-29 | 1.107 | 1.102 | 1.003 | 1.170 | .982 | 1.028 |
| 30-34 | .999 | 1.014 | .980 | .933 | .972 | .971 |
| 35-39 | 1.008 | .883 | 1.048 | .937 | 1.017 | 1.011 |
| 40-44 | 1.093 | 1.188 | 1.048 | 1.092 | 1.002 | .959 |
| 45-49 | .916 | .729 | .883 | .840 | .990 | 1.026 |
| 50-54 | 1.232 | 1.446 | 1.101 | 1.236 | .994 | .975 |
| 55-59 | - | - | - | - | - | - |

Source: Estimated from Census Data.

## TABLE A.3

### Index of Dissimilarity of Age Distribution for Cochin, 1921 and 1941 Compared to 1891.

### COCHIN

| Age Groups | 1891 | 1921 | Difference between 1891 and 1921 | 1941 | Difference between 1891 and 1941 |
|---|---|---|---|---|---|
| 0-4 | 15.76 | 14.29 | -1.37 | 13.81 | 1.95 |
| 5-9 | 14.62 | 14.34 | .28 | 13.64 | .98 |
| 10-14 | 12.68 | 13.45 | .77 | 13.11 | -.43 |
| 15-19 | 9.04 | 9.46 | -.42 | 10.85 | -1.81 |
| 20-24 | 9.00 | 9.53 | .53 | 8.99 | .01 |
| 25-29 | 9.17 | 8.23 | .94 | 7.89 | 1.28 |
| 30-34 | 7.16 | 6.75 | .41 | 6.67 | .44 |
| 35-39 | 5.50 | 5.78 | -.28 | 5.66 | -.16 |
| 40-44 | 4.95 | 4.87 | .08 | 4.70 | .25 |
| 45-49 | 3.25 | 3.67 | -.42 | 4.00 | .75 |
| 50-54 | 3.15 | 3.15 | -- | 3.21 | -.06 |
| 55-59 | 1.62 | 2.05 | -.43 | 2.65 | 1.03 |
| 60 + | 4.08 | 4.44 | -.36 | 4.86 | .78 |
| Index of Dissimilarity | | | 3.15 | | 4.99 |

Source: Computed from Census Data.

## TABLE A.4

### Index of Dissimilarity of Age Distribution for Travancore, 1921 and 1941 Compared to 1891.

TRAVANCORE

| Age Group | 1891 | 1921 | Difference between 1891 and 1921 | 1941 | Difference between 1891 and 1941 |
|---|---|---|---|---|---|
| 0-4 | 14.52 | 14.18 | .34 | 14.67 | -.15 |
| 5-9 | 13.80 | 14.61 | -.81 | 14.46 | -.66 |
| 10-14 | 11.98 | 13.33 | -1.35 | 13.25 | -1.27 |
| 15-19 | 9.82 | 10.16 | -.34 | 10.56 | .74 |
| 20-24 | 9.09 | 9.44 | -.35 | 8.85 | .24 |
| 25-29 | 9.15 | 8.45 | .70 | 7.61 | 1.54 |
| 30-34 | 7.05 | 6.41 | .44 | 6.48 | .57 |
| 35-39 | 6.06 | 5.91 | .15 | 5.59 | .47 |
| 40-44 | 4.81 | 4.53 | .28 | 4.60 | .21 |
| 45-49 | 3.74 | 3.77 | -.03 | 3.89 | -.15 |
| 50-54 | 3.33 | 3.00 | .33 | 3.07 | .26 |
| 55-59 | 2.38 | 2.04 | .34 | 2.48 | -.10 |
| 60+ | 4.29 | 4.17 | .12 | 4.79 | -.50 |
| Index of Dissimilarity | | | 2.79 | | 3.49 |

Source: Estimated from Census Data.

# APPENDIX B. ESTIMATES OF MORTALITY AND MIGRATION

We have dealt with fertility in detail in the text but the other two components of population dynamics - mortality and migration - were not considered. The reasons for this apparent neglect are the lack of data on the basis of religion on these aspects and our strong belief that neither mortality nor migration differed considerably between the various religious groups. In this appendix, we deal with the general mortality and migratory patterns that existed in Kerala during the period under study to get an overview of the same.

## A. Mortality

The mortality rates for Kerala are shown in table B.1. Crude death rates were estimated from the life tables prepared by Bureau of Economics and Statistics of the Government of Kerala (quoted in Namboodiri, 1968). The gain in expectation of life at birth and consequently the decline in crude death rate in earlier census years seem to be smaller than later years starting from 1931. This does not come as a surprise. The absence of famines or epidemics and the general increase in employment and improvement in the economic situation played a major role in this mortality decline. Higher standards of hygiene and public health that existed in Kerala also might have contributed to this trend. Crude death rates have declined from 38 to 21 during the fifty year period.

However, we feel that actual crude death rates may be lower than what is presented in the table due to high infant and child mortality rates. This is especially true of earlier years when infant and child mortality were comparatively high (Namboodiri, 1968).

B. Migration

In this section we intend to look at the impact of migration in the population dynamics of Kerala. In the absence of precise data on migration, we are depending on the place of birth information available in the censuses. Zachariah's estimates (quoted in Namboodiri, 1968) of the volume of net migration to Travancore-Cochin and Kerala and its relative contribution to the population composition of the state are given in table B 2.

An examination of the table shows that migration has not affected the population composition of Kerala to any significant extent. It disputes the conventional notion of Kerala as a losing state in terms of migration. Actual data show that up to 1931 Kerala was gaining people, though not significantly, through migration. The losing trend started as late as 1931. Another fact which follows from the table is the predominance of female migrants. The increasing trend towards negative net migration could be due to the movement of educated and technically trained people to other states in search of better economic opportunities. An examination of the age distribution of migrants between 1951 and 1961 as given in table B 3 shows that the loss of population due to migration is in the young age groups (0-9) and in the middle age groups (20-39). All other age groups show gain due to migration.

This seems to be quite logical when we consider the cultural attitudes of Keralites. Economically active population (20-39) moves to other states in search of jobs with their young children who remain with them during childhood. Children at a later stage are sent home for education. This reverse flow is greater in the case of females due to cultural reasons. On retirement, people gradually move back to their home land to spend the rest of their lives. Owing to this movement back and forth, the extent of net migration is not very large and the impact of migration on the population composition does not appear to be significant.

### TABLE B.1

### Expectation of Life at Age Zero and Five and the Estimated Crude Death Rates from e 1911-21 to 1951-61.

| Year | $e^\circ_0$ | $e^\circ_5$ | C.D.R |
|---|---|---|---|
| 1911-1921 | 28.5 | 34.6 | 35.2 |
| 1921-1931 | 31.1 | 39.7 | 32.1 |
| 1931-1941 | 34.1 | 41.1 | 29.3 |
| 1941-1951 | 41.1 | 48.2 | 24.3 |
| 1951-1961 | 48.1 | 53.1 | 20.8 |

Source: Estimated from the Life Tables of the Bureau of Economics and Statistics of the Government of Kerala (quoted in Namboodiri, 1968).

### TABLE B.2

Volume of Net Migration and Rate of Net Migration and Rate of Natural Increase as a Percentage of Mid-Decade Population, Travancore-Cochin 1901-1951 and Kerala 1951-1961.

TRAVANCORE - COCHIN

| Year | Net Migration | | Rate of Natural Increase | | Rate of Net Migration | |
|---|---|---|---|---|---|---|
| | M | F | M | F | M | F |
| 1901-11 | 3 | 7 | 14.2 | 14.0 | .2 | .4 |
| 1911-21 | 7 | 12 | 13.6 | 13.0 | .3 | .5 |
| 1921-31 | 33 | 35 | -21.4 | 22.8 | 1.2 | 1.2 |
| 1931-41 | -8 | 3 | 17.3 | 17.4 | -.2 | .1 |
| 1941-51 | -60 | -31 | 22.4 | 22.2 | -1.4 | -.8 |
| | | | KERALA | | | |
| 1951-61 | -200 | -86 | 25.0 | 22.8 | -2.7 | 1.1 |

Source: Zachariah, (quoted in Namboodiri, 1968).

# TABLE B.3

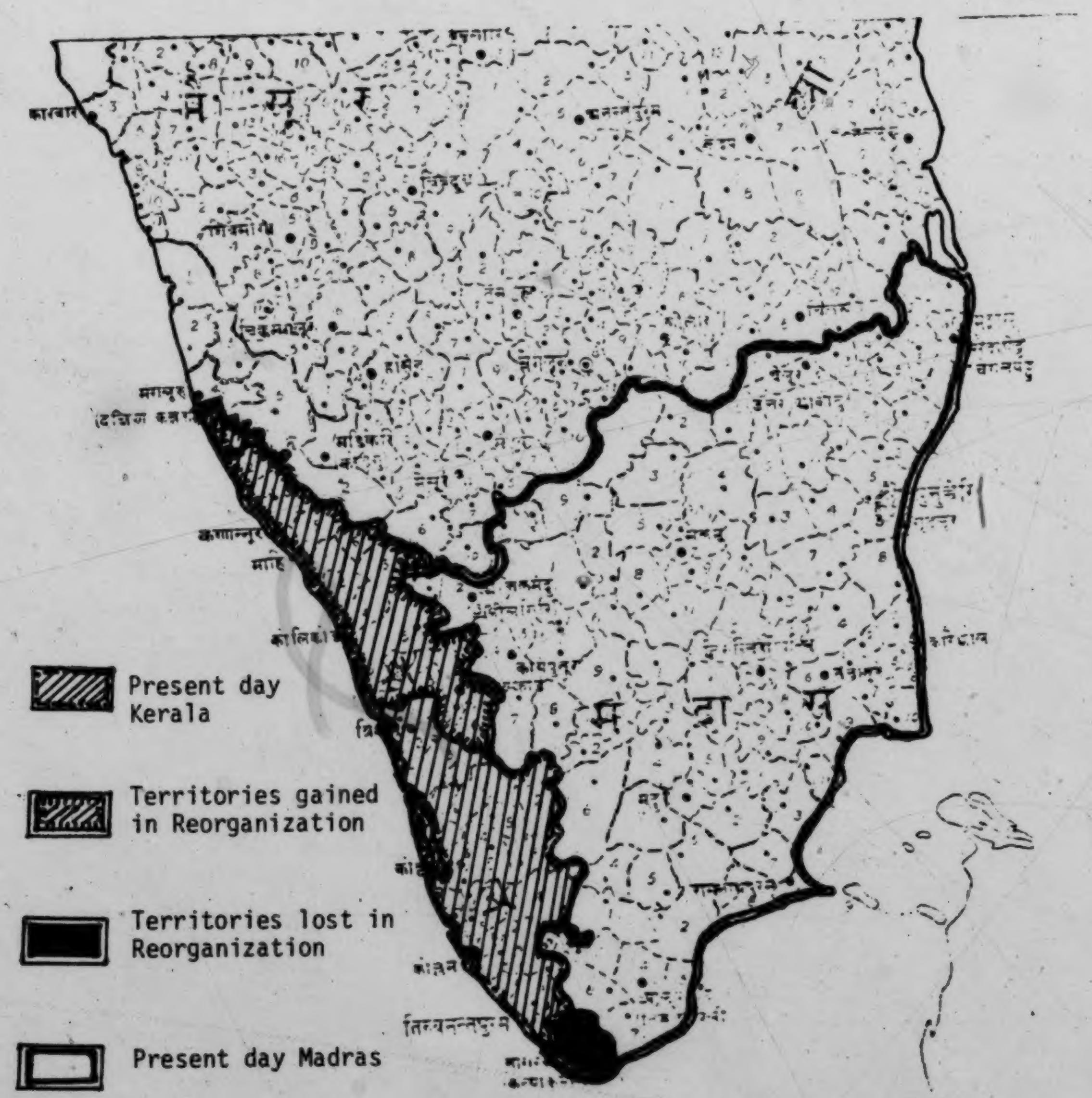
## Inter-censal Migration to Kerala by Age and Sex
1951-1961
(Figures in Thousands)

| Age Group | Both Sexes | Male | Female |
|---|---|---|---|
| 0-9 | -179 | 91 | 88 |
| 10-19 | +311 | 76 | 235 |
| 20-39 | -556 | -269 | -287 |
| Above 40 | +140 | +85 | +55 |

Source: Zachariah, (quoted in Namboodiri, 1968).

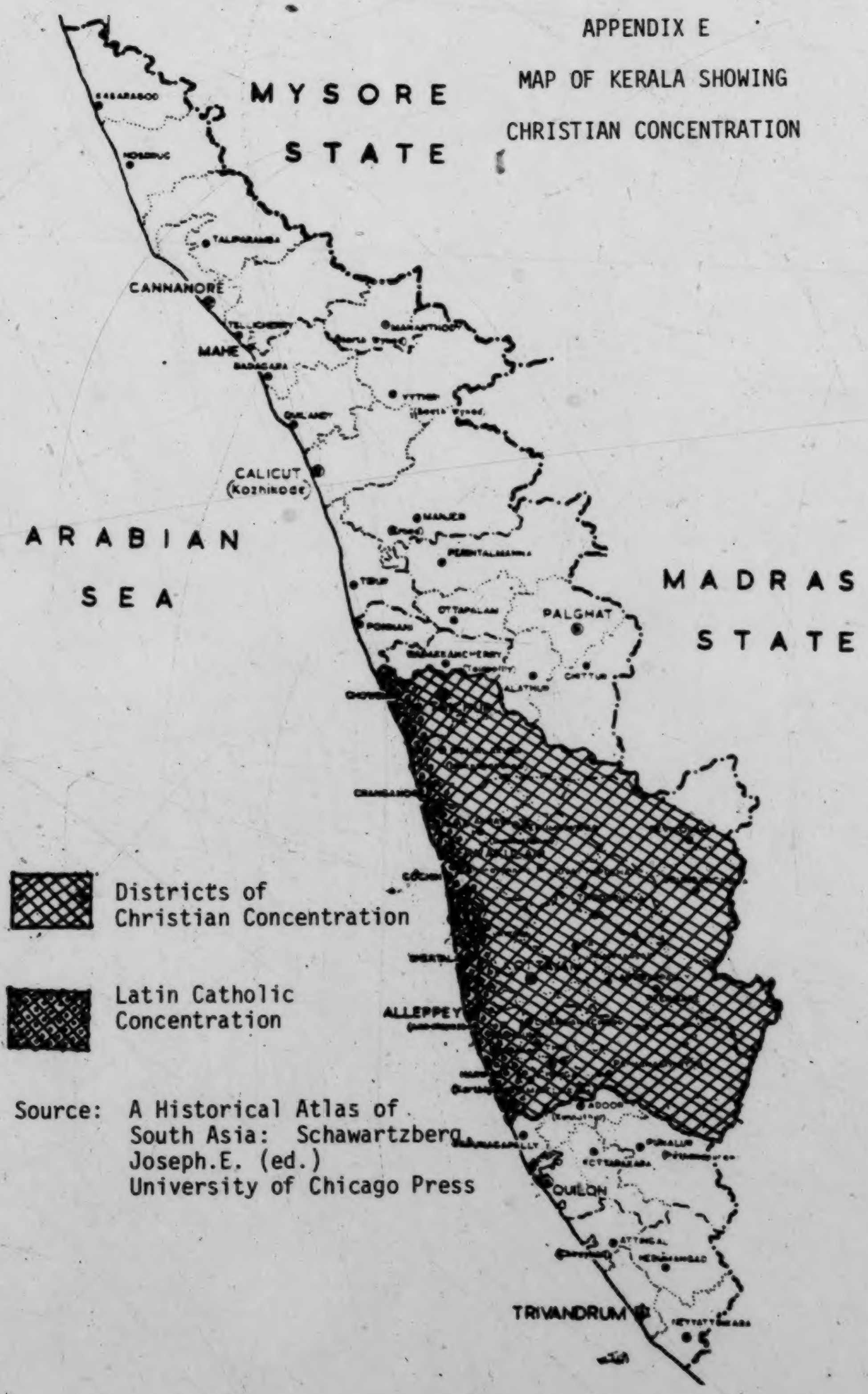
## APPENDIX D

## MAP OF KERALA SHOWING TERRITORIES GAINED AND LOST BY TRAVANCORE-COCHIN DURING REORGANIZATION


▨ Present day Kerala
▨ Territories gained in Reorganization
■ Territories lost in Reorganization
☐ Present day Madras
तिरुवनन्तपुरम

## APPENDIX E

## MAP OF KERALA SHOWING CHRISTIAN CONCENTRATION

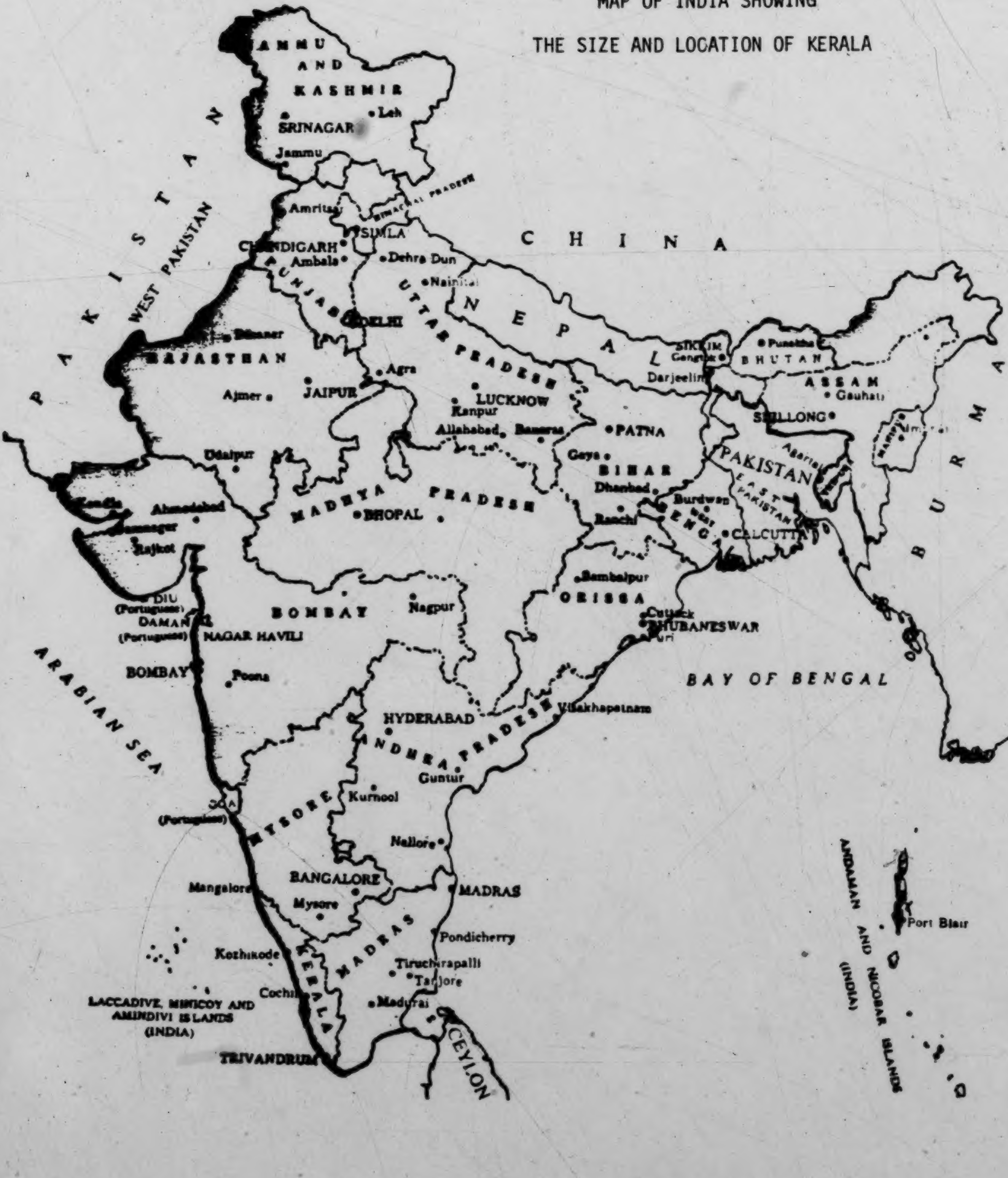

MYSORE STATE
CANNANORE
MAHE
CALICUT (Kozhikode)
ARABIAN SEA
MADRAS STATE
PALGHAT
ALLEPPEY
QUILON
TRIVANDRUM
▨ Districts of Christian Concentration
▩ Latin Catholic Concentration

Source: A Historical Atlas of South Asia: Schawartzberg, Joseph.E. (ed.) University of Chicago Press

# APPENDIX C

## MAP OF INDIA SHOWING

## THE SIZE AND LOCATION OF KERALA


JAMMU AND KASHMIR
SRINAGAR
Leh
Jammu
PAKISTAN
WEST PAKISTAN
Amritsar
HIMACHAL PRADESH
SIMLA
CHANDIGARH
Ambala
Dehra Dun
Nainital
PUNJAB
DELHI
CHINA
NEPAL
Bikaner
RAJASTHAN
UTTAR PRADESH
Agra
JAIPUR
Ajmer
LUCKNOW
Kanpur
Allahabad
Banaras
PATNA
SIKKIM
Gangtok
Darjeeling
Punakha
BHUTAN
ASSAM
Gauhati
SHILLONG
Agartala
Imphal
BURMA
Udaipur
Gaya
BIHAR
Dhanbad
PAKISTAN
EAST PAKISTAN
Burdwan
WEST BENGAL
Ranchi
CALCUTTA
Kandla
Ahmedabad
Jamnagar
Rajkot
MADHYA PRADESH
BHOPAL
Sambalpur
ORISSA
Cuttack
BHUBANESWAR
Puri
DIU (Portuguese)
DAMAN (Portuguese)
NAGAR HAVILI
BOMBAY
Nagpur
BOMBAY
Poona
ARABIAN SEA
BAY OF BENGAL
Visakhapatnam
HYDERABAD
ANDHRA PRADESH
Guntur
Kurnool
GOA (Portuguese)
MYSORE
Nellore
BANGALORE
Mangalore
Mysore
MADRAS
MADRAS
Pondicherry
Kozhikode
KERALA
Tiruchirapalli
Tanjore
Cochin
Madurai
LACCADIVE, MINICOY AND AMINDIVI ISLANDS (INDIA)
TRIVANDRUM
CEYLON
ANDAMAN AND NICOBAR ISLANDS (INDIA)
Port Blair